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AMERICAN BEE JOURNAL

50TH YEAR

No 1

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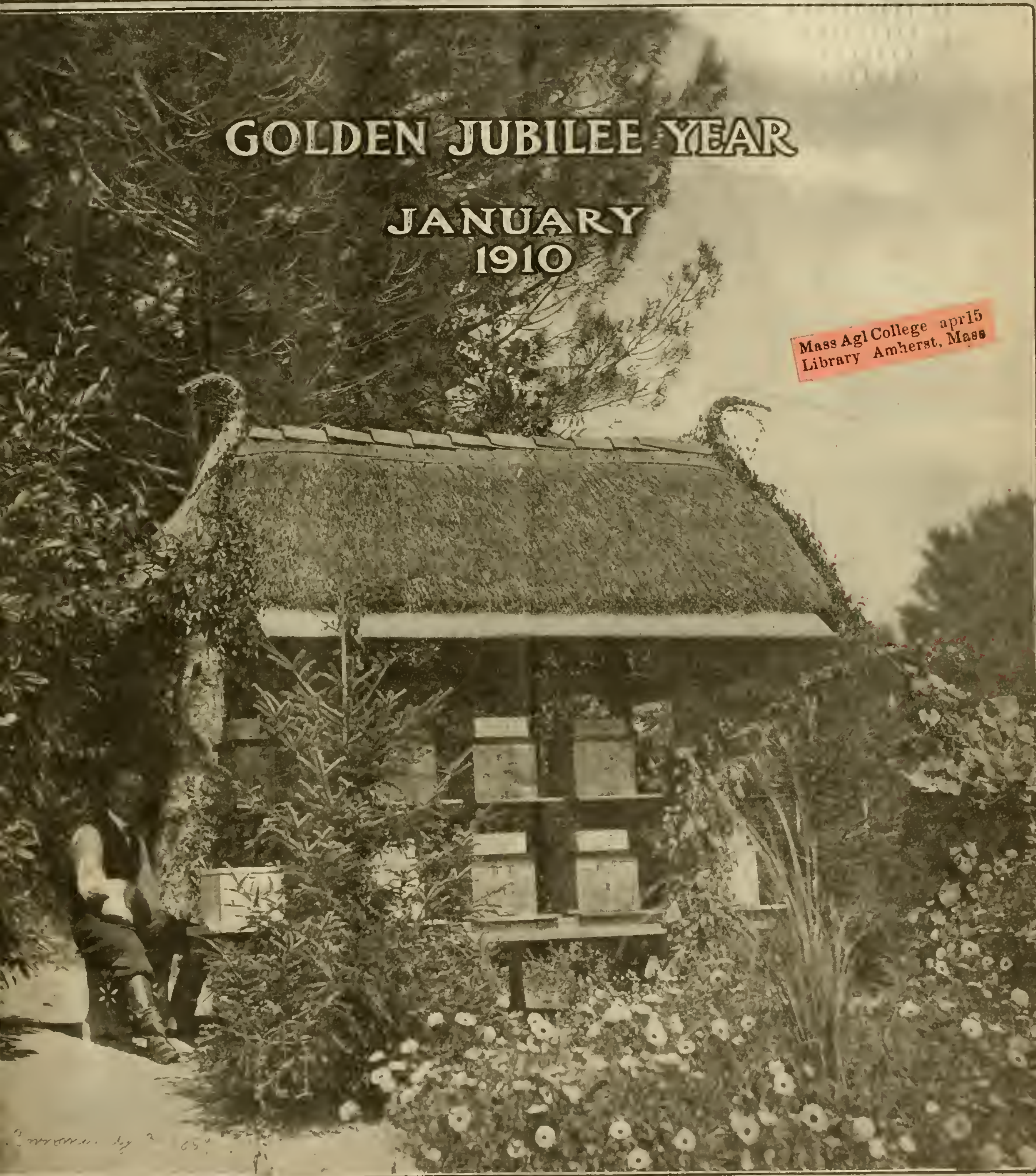
JANUARY
1910



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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY
146 W. Superior St., Chicago, Ill.

IMPORTANT NOTICE.

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec10" on your label shows that it is paid to the end of December, 1910.

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Objects of the Association.

1st.—To promote the interests of its members.

2d.—To protect and defend its members in their lawful rights.

3d.—To enforce laws against the adulteration of honey.

Annual Membership Dues, $1.00.

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N. E. FRANCE, Platteville, Wis.

☞ If more convenient, Dues may be sent to the publishers of the American Bee Journal.

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Have you a good bee-book? Many bee-keepers do not have. And that is where they make a big mistake. A bee-paper cannot take the place of a good bee-book. The paper is a splendid thing to read *in connection with the book*. On another page we make some generous clubbing offers of bee-books with the American Bee Journal.

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A new method, just published, worthy of investigation by all progressive bee-keepers. Advantages claimed for the plan of treatment. No clipping of queens' wings—no caging of queens—not even necessary to look for queens; no pinching of queen-cells—no shook swarming—no dividing—no extra expense connected with the plan—plan simple and easy to carry out—satisfactory honey crop—saves time and labor. Send to

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For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

What They Say of Our Queens

GEORGE W. YORK & CO.:—The two queens received of you some time ago are fine. They are good breeders, and the workers are showing up fine. I introduced them among black bees, and the bees are nearly yellow now, and are doing good work. A. W. SWAN.
Nemaha, Co., Kan., July 15, 1905.

✣✣✣

GEORGE W. YORK & CO.:—After importing queens for 15 years you have sent me the best. She keeps 9½ Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week. CHAS. MITCHELL.
Ontario, Canada, July 22, 1905.

✣✣✣

GEORGE W. YORK & CO.:—The queen I bought of you has proven a good one, and has given me some of my best colonies. N. P. OGLESBY.
Washington Co., Va., July 22, 1905.

✣✣✣

GEORGE W. YORK & CO.:—The queen I received of you a few days ago came through O.K., and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee-keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee-line. E. E. MCCOLM.
Marion Co., Ill., July 13.

We usually begin mailing Queens in May, and continue thereafter, on the plan of "first come first served." The price of one of our Untested Queens alone is 75 cents, or with the monthly American Bee Journal one year—both for $1.40. Three Queens (without Journal) would be [illegible], or 6 for [illegible]. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage You cannot do better than to get one or more of our fine Standard-Bred Queens.

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A VERY SPECIAL NOTICE!

75c Subscription Price Extended to Feb. 15, 1910, To All Present Regular Subscribers Only

We have decided to grant an extension of time from Jan. 1 to Feb. 15, 1910, on the 75c subscription rate on the American Bee Journal, to all present subscribers who remit direct to this office. This means that all who are in arrears, and any others who wish to advance their subscriptions to the end of 1910 or 1911, at 75c a year, can do so, if they will remit to us *before Feb. 15*—the middle of next month.

This is a *final* notice, and is given so that no one now getting the American Bee Journal, who wishes to clean up his or her back subscription, and also take advantage of the former 75c subscription price to the end of 1910 or 1911, will have ample time to do so. We want to be entirely fair, and even generous, to our present regular readers, hence this extension of time limit.

Now let us have a great inflow of renewals for the next 30 days. We are willing to be kept busy day and night, if necessary, taking care of your subscription orders. Address all to—

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Are money-savers. We have a full line of Supplies, Bees, Queens, etc., and can supply you with anything in the

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are used by more Government Experiment Stations, more leading Agricultural Colleges, more well-known Fanciers and Practical Poultrymen than all other makes combined.

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Cyphers Incubators and Brooders are guaranteed to you—you have 90 days—4 hatches to prove their superiority.

Write today for our big, handsome Catalog for 1910, describing Cyphers Incubators, Brooders and Poultry Supplies.

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We Have Some Copies Left of the Book

"Bees and Honey"

By Thomas G. Newman

bound in cloth, that we offer cheap to close out. It contains 160 pages, and is bound in cloth. It used to be a one-dollar book, but we will mail them, so long as they last, at 50 cents each; or with the American Bee Journal one year—**both for only $1.20.** Surely this is a bargain. The book is well illustrated, and has some good information in it, especially for beginners. Address all orders to

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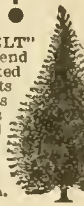

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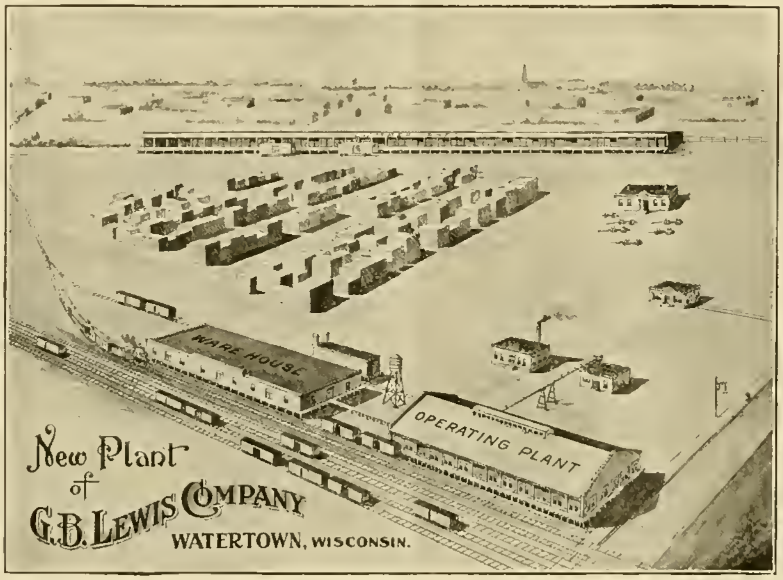

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¶ Our Operating Plant Having Been Destroyed by Fire on June 20, 1909, Building Operations on a New and Complete Plant Were Begun at Once. This New Plant is Located a Few Blocks from the Old One, the Change in Location Being Made to Avail Ourselves of Larger Ground Space and the Best Railroad Facilities. Needless to Say We Will Be Better Equipped Than Ever to Handle our Constantly Increasing Business and to Furnish the Finest Goods.

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L. L. LANGSTROTH
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AMERICAN BEE JOURNAL

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

Published Monthly at $1.00 a Year, by George W. York & Company, 146 West Superior Street,

GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., JANUARY, 1910

Vol. L---No. 1

Editorial Notes and Comments

Bees Helping to Save Fruit from Frost

In a conversazione (British Bee Journal), the fact was brought out that not only do bees aid in the fertilization of fruit-blossoms, but by that very act might be the means of saving a good part of a crop from the frost. A blossom remains fresh for some time, so long as fertilization has not taken place, but very soon after that occurs it dries up and falls off. Fruit-growers know that if a frost occurs when fruit-trees are in full bloom, the tender stigma is blackened by the frost, and the fruit is "blasted." Suppose a blossom opens Monday, and no insect visits it. It remains expectant Tuesday. "Then comes a frost, a killing frost" Tuesday night, and it's all day with the little fruit. Suppose, however, that a bee had visited it on Monday. Being fertilized the stigma would promptly dry up, and by Tuesday night the little fruit would be sufficiently ripened to resist the frost.

Score another point for the little busy bee.

Bane of Green or Unripe Honey

We have received the following from Mr. R. A. Burnett, of R. A. Burnett & Co., the oldest honey-dealing firm in this city:

CHICAGO, ILL., Dec. 28, 1909.

EDITOR AMERICAN BEE JOURNAL:—I have read Mr. E. D. Townsend's article in the November and December American Bee Journal, entitled, "The Two Cans of Honey." The story is well told, and it is in no sense overdrawn. With my more than 30 years of dealing in honey, I can testify that the greatest enemy extracted honey has had during that period of time, has been green or unripe honey. The greatest loss is in the volume of business, for where a family gets a can of this aborted sweet, they will in all probability drop the use of honey for months, yea, even years, for they say they cannot get honey any more; this having left a bad taste in their mouth has hurt the sale of honey.

It is not true that bakers can use unripe honey to advantage; they will not, and do not use it. The large users of honey now submit all purchases of honey to a chemical test, and if it does not meet with their requirements it is rejected; hence, it is only the ignorant and the poor man, that can least afford to be cheated, that is cheated.

It may be encouraging to bee-keepers to know that there is less unripe honey coming on the market now than formerly.

Yours respectfully,
R. A. BURNETT.

We are always glad to get something from Mr. Burnett. His many years of experience surely has taught him much about the best quality of honey for market. And on a good many other topics relating to honey and its marketing he could give a world of information. We wish he would feel free to "chip in" any time he sees a chance to help bee-keepers, out of his large experience with honey.

It surely is good to hear that the market receives less unripe honey now than it used to. But what honest bee-keeper would knowingly ship unripe honey to the city or general market?

New Zealand Bee-Bulletin, No. 18

From that far away land where Christmas comes in the middle of summer, where there are the best Sunday-schools, where all the women can vote, and where *they* have helped to vote down the saloons, comes this government bulletin of the New Zealand Department of Agriculture. It is written by that able apiculturist, Isaac Hopkins, who has done so much for bee-culture in that land, and who retires from public service with the issue of this bulletin.

There are 70 octavo pages of reading matter, and 19 plates, many of these being original full-page half-tone engravings.

In spite of the fact that New Zealanders are clear on the other side of world, bee-keeping is in many respects the same there as here.

Instead of seconding Mr. Hutchinson's plea for "more bees," Mr. Hopkins advises against putting all one's eggs into one basket. As to the profits, Mr. Hopkins estimates that from a well-conducted apiary, in an average good district, the net profits per colony should reach from $4.25 to $5.00 per annum through a number of successive seasons. He says wisely:

> "Outlay for good literature should never be stinted, for the obtaining of one good 'wrinkle' from the experience of a writer may be the means of adding largely to the profits of the apiary.'

Three fine pictures illustrate the manner of turning a frame over while holding in the hands without having the comb break out of the frame—a very important item 40 years or more ago, but hardly necessary in these days of wires and foundation splints.

He emphasizes the matter of testing extracted honey by means of a hydrometer. Obtaining from grocers in the ordinary way 20 cans of different varieties and grades of honey, he tested carefully their specific gravity. He says:

> Before testing, the condition of each sample was noted, in order to compare the specific gravity with its appearance. Eleven samples ranged from 1.400 to 1.430, with an average of nearly 1.413, while the remaining 9 ranged from 1.350 to 1.390. Those above 1.410 were very firm and dry before testing, and the whole 20 samples were granulated. Those from 1.400 to 1.410 appeared to be well ripened, but were not so firm as the others; there was a marked difference in those below 1.400, which were soft and moist. My opinion is that the first-mentioned were thoroughly ripe and would keep any length of time; the second lot, ranging from 1.400 to 1.410, were well-ripened and fit for the market; while all the samples registering below 1.400 were very doubtful regarding their keeping qualities—one at 1.385 had already begun to ferment. These figures will be valuable for comparison with those of future tests. A portion of each sample is being kept sealed to test by time. It was very noticeable that the better the honey the higher was its specific gravity.

Ripening honey outside the hive is

JAN 27 1914

advised, with this argument in its favor, which will appeal to many:

> "I may add that by ripening honey outside the hive swarming can be better kept under control."

The climate, with its great heat and dryness, may favor ripening outside the hive.

Perhaps this same climate has something to do with the fact that Mr. Hopkins is strongly opposed to the use of excluders under surplus apartments. The advantage of keeping the queen below is entirely overbalanced by the hindrance to free ventilation, in that hot climate.

Queen Mating More Than Once

There have been at different times reports of queens mating the second time, but generally the observations have been of such character that there was at least a possibility of mistake. Now comes a report in the British Bee Journal, so circumstantially given, and in which there was such close watching, that there seems no possibility of mistake. A virgin was in a baby-nucleus hive containing a section, with glass sides, so that all that was going on could be seen. June 29 the young queen came out 5 times, flying around the entrance for a few seconds, then darting off and staying away only a few minutes; but the last time she was gone she was away for 5 minutes, returning at 5 minutes to 4 o'clock, with unmistakable signs of impregnation.

June 30th, she flew out 5 times, the longest flight lasting 5 minutes. July 1st she came out twice for short flights; then she came out again at 4:20, and returned again after having been out about 20 minutes, and upon her return the marks of her having mated again were most distinct.

It is quite possible that the instances of more than once mating are more common than generally supposed.

Breeding Immune Stock

Before the visitors and delegates to the National Farm Land Congress which met in Chicago lately, W. M. Hays, Assistant Secretary of the United States Department of Agriculture, evoked bursts of applause by declaring that a start had been made in the scientific breeding of cattle whereby in a few years even an inexperienced farmer would be able to rear cattle immune to tuberculosis, a consummation that will be worth millions of dollars to the nation at large. Mr. Hays said:

> "As proof that we are on the road to success in the undertaking, I may point to the recent accomplishments of the department and the institutions with which it is affiliated regarding the production of plants resistant to diseases which previously made the growing of the parent stocks impracticable.
>
> "Disease-resistant cow-peas, cottons, cantaloupes, flax and varieties of cereal grains have been produced. These steps, however, are merely preliminary to blaze the way to the production of the tuberculosis-proof steer."

If cows, cow-peas, etc., can be made immune to the diseases that compass their destruction, what about bees? A foul-brood-proof bee is a thing much to be desired, and in the light of what has been accomplished its attainment seems not at all impossible, if indeed improbable. Indeed, it is not unreasonable to believe that something in that line has already been automatically attained. Some bees succumb to foul brood more readily than others. May that not be that the latter have started at least just a little way on the road to immunity? In a locality where foul brood is freshly introduced, its ravages are more severe than in a locality where it has been for a long time existent. Have not these latter become immune to a certain extent? Why not expect a bee immune to foul brood?

Painted vs. Unpainted Hives

D. M. Macdonald, in the British Bee Journal, expresses a very kindly feeling toward the associate editor of the American Bee Journal—which feeling is heartily reciprocated — and then wants to know something. He refers to the reason for leaving hives unpainted, viz.: the "better chance for the moisture to dry out of unpainted hives than out of painted ones," and says:

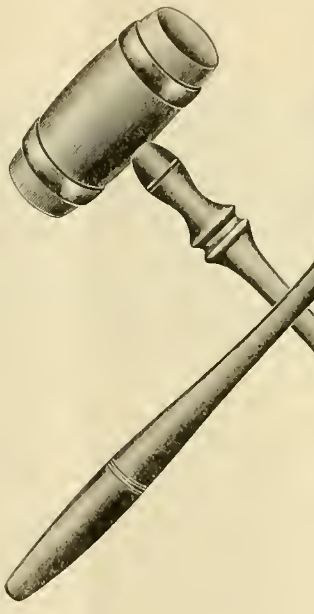
> "Please explain the reason why you think so. Is it that the wish is father to the thought? Now, I am ready to contend the opposite. Damp, moisture, or mold, is far more likely to find its way in, and stay there, in an unpainted than in a painted hive, other things being equal."

Now listen to that Scotchman. Wants "reason" for a thing, believes the opposite, and then doesn't give a word of "reason" for *his* belief. Well, let us see how far we can agree.

"Damp, etc., is more likely to find its way into an unpainted hive." Agreed. The paint is a hindrance to free passage. "And stay there." There we part company. Why should damp be more likely to stay in an unpainted hive? Your "reason," Mr. Macdonald? If an unpainted wall allows a freer passage in, why will it not allow a freer passage out?

But now for "the reason." Paint hinders the passage of moisture, into or out of a hive. In a heavy rain a painted hive is better, because it keeps out the moisture. After the rain is over, the unpainted hive is better, for it lets the moisture come out. But there is no great trouble from rains. The trouble from moisture in the hives is in the winter, whether the hives be outdoors or in the cellar. The moisture is *originated in the hive*. Paint can do no possible good toward preventing that moisture; it can not make the breath of the bees less. But it can do harm by preventing the outward passage.

Now you have "the reason." But the belief is not so stubbornly held that it cannot be changed, and if a sufficient "reason" for "the opposite" be given, there will be a prompt recantation.



THE LANGSTROTH GAVELS PRESENTED BY MRS. J. J. GLESSNER, OF CHICAGO.

The National Presidency

We have received a number of congratulatory messages since the announcement of our election to the presidency of the National Bee-Keepers' Association, last month. We certainly appreciate such kind words, and only hope that we may be of some real service, not only to the Association, but to beedom at large.

Hon. Geo. E. Hilton, whom we succeed in the presidency, wrote us as follows:

> FREMONT, MICH., Dec. 7, 1909.
>
> DEAR MR. YORK:—I congratulate you upon your election. I have felt it a very great honor to be the president of the largest society of its kind in the Western world for the past 2 years; and I am more than glad that you are my successor. No one deserves it more than you, and no one would fill the position more creditably. If I can serve you in any way, I shall feel it a privilege to do so, and I want you to call on me at any time, and I am at your service.
>
> I am sending you by this registered mail the gavel that we all appreciate so much because of its associations, and of the promptings of those who secured it and presented it to our Association.
>
> With the very best wishes for your success, I am,
>
> Very truly your friend,
> GEO. E. HILTON.

The president's gavel referred to is the one presented to the National when it met in Chicago, in 1905. It was made by a son of Mrs. J. J. Glessner, a Chicago lady bee-keeper, the wood having been taken from a tree planted by Father Langstroth perhaps a half century ago in Oxford, Ohio. Mrs. Glessner presented it to the Association, as she did also a similar gavel to the Chicago - Northwestern Bee-Keepers' Association at the same time.

It is needless to say that as president of both of these honored associations, we shall keep the gavels most carefully, so as to turn them over, some day, untarnished and undishonored.

Mr. W. Z. Hutchinson, editor of the Bee-Keepers' Review, sends these assuring words:

> FLINT, MICH., Dec. 7, 1909.
>
> BRO YORK:—I am glad to congratulate you on your election to the presidency of the National. I shall be more than glad to stand with you and help in every way to make a success of the Association.
>
> Fraternally yours,
> W. Z. HUTCHINSON.

We shall hope to have the hearty co-operation of every bee-keeper, whether a member of these organizations or not, in trying to lift American apiculture, as expressed in these two leading conventions, to a little higher level, if that may be, during 1910—the new year upon which we all have just entered with such high hopes and inspiring resolves.

Keeping Bees Without a Bee-Paper

The following paragraph is taken from the December Bee-Keepers' Review:

> Most of the subscriptions to the bee-journals expire with the year; and there are always more or less of these subscriptions ordered discontinued. Sometimes reasons for this step are given. The one most frequently given is: "I can't afford to take it another year." When a bee-keeper can't afford to take a bee-journal there is something radically wrong. If he hopes and expects to succeed he can't afford *not* to read all of the bee-journals published. It is knowledge of his business that helps a man to succeed; it is from ignorance that he often fails. A man can't know too much about his business. The successful bee-keepers, poultrymen, farmers, gardeners, etc., all read the leading journals devoted to their businesses. The man who drops his bee-journal because he thinks he can't afford it, is almost as foolish as the sailor who ventures out to sea without a compass. I am not writing this so much because I hate to lose subscribers, as because I know it is *true*, and that some men have not given it sufficient thought.

Editor Hutchinson is right. We have large opportunity to learn the "reasons" why some bee-keepers discontinue their subscriptions to bee-papers. Some say they "haven't time to read a bee-paper!" Then they haven't time to keep bees at all. No man who desires to be successful can afford to get along without at least one good bee-paper and one good bee-book. Life is too short to learn everything by experience.

Then, again, what is $1.00 for a year's copies of a bee-paper—less than 10 cents per copy if a monthly! There must be something radically wrong with the man, or bee-keeper, who can't get at least 10 cents worth of helpful information out of a single copy of any real bee-paper that was ever published.

The last census showed something like 700,000 persons keeping bees in the United States. And there are perhaps not many over 5 percent of that number who read a bee-paper. Why, one would think that at least one in 10 bee-keepers would be regular subscribers. And yet it is only one in 20!

—There are now just 3 bee-papers published in the United States. At the full subscription price they can be had for $3.00 a year. (*We* will furnish the 3 for $2.50.) In what other way can the would-be bee-keeper better invest $2.50 each year. We don't know.

The bee-papers are certainly *cheap* in price. And, without fearing the accusation of being egotistic, we think we can say they are *good* in quality of contents. At any rate, we know at least one bee-paper whose publishers are trying to give good value for the subscription money that is asked for it.

Miscellaneous News-Items

Death of Counts Barbo and Borromeo

Two noted Italian apiarists died recently. The first one is Count Gaetano Barbo, one of the founders of the National Association of Bee-Keepers, and of the journal l'Apicoltore, in 1867. He was for a number of years vice-president of the National Italian Association. His greatest claim to fame, however, was the excellent set of microscopical studies which he prepared of the anatomy of the bee, and which were made into lithographic pictures by the noted artist, F. Clerici, in the seventies. The most eminent of these studies is reproduced in the latest edition of the Langstroth-Dadant "Hive and Honey-Bee."

Count Barbo was a little under 70 years old. He died September 13, 1909. He was not only a noted apiarist, but also an up-to-date agriculturist. Wealthy though he was, he did not hesitate to take a hand in agriculture, himself directing the work of a large, progressive farm, in which the country people were educated to the most advanced modern methods.

The other death is that of Count Emilio Borromeo, who was also one of the founders of the Italian Association of Bee-Keepers. He died a few days after Count Barbo. It was through the efforts of these men that modern apiculture found its way among the farming classes in Italy.

The picture on the first page shows the apiary of Count Borromeo, in 1870, at his country home.

We are indebted to Mr. C. P. Dadant not only for the facts as given above, but for the picture on the first page and the two used in his article on page 14.

Cure for Bee-Stings

Bee-keepers, as a rule, have little faith, in the thousand and one remedies for stings that have been lauded. Here comes a cure, however, that is given by a veteran, who ought to know something about stings, and it may be worth trying, at least in cases where persons not bee-keepers are stung, for a regular bee-keeper would hardly feel that he could afford to stop in his work 4 or 5 minutes for each sting received. This is what Elias Fox says, in Gleanings:

> Get the best proof alcohol, and carry a little vial of it in the vest or shirt pocket; and when a sting is received, simply remove the cork from the bottle and place the mouth of it over the wound after removing the sting, and reverse the bottle and hold it over the wound for about one minute, and keep moving it slightly over the wound; then remove and rub the alcohol into the skin; then apply the bottle again, and do this three or four times, and the pain is gone, and it will be but a few minutes before the swelling will also be gone. I have never had any swelling left after 15 minutes, and the pain is gone almost instantly. Don't be afraid to make a thorough application.

Sectional vs. Langstroth Hives

Jas. A. Green, in the Bee-Keepers' Review, says that his experience differs from that of E. D. Townsend. Mr. Townsend thought bees built up better in Langstroth than in the shallower sectional hives. Mr. Green has had the two kinds side by side, in large numbers, for some years not less than a hundred of each kind, and says:

> Almost invariably my experience has been that the bees breed up better in sectional hives than in the Langstroth. My earliest and largest swarms are always from the sectional hives.

Honey in Switzerland

Among the Swiss laws regarding honey, as given in Prak. Wegweiser, are the following:

Art. 87. Under the designation "honey," may be brought into trade only the pure, unadulterated bee-honey.

Art. 88. Honey which is produced through artificial feeding of sugar, or of substances containing sugar, must be labeled "sugar-honey."

Art. 89. Foreign honey may be offered only under declaration of the country of its origin.

Orange-Blossom Honey

It has been generally understood that not much honey from orange-blossoms has ever been produced. If a report in Gleanings is to be credited, there are at least localities where the reverse is true. R. Powell says that after 15 years' experience with basswood in Wisconsin, he considers the orange at Riverside, Cal., to be the freer yielder. He says:

> "There is scarcely a day while the trees are in bloom but that the branches can be shaken so as to wet with nectar the ground under the tree. The orange-pickers are always wet all day while they are at work; in fact, teams that are cultivating have to be washed after the day's work is done."

Is Spider-Plant Tender?

"The 'spider-plant' or 'flower' is *Cleome pungens*. It is a native of the West Indies, and requires stove treatment in this country."—*British Bee Journal.*

Is there not some mistake about this? It requires no stove treatment in Northern Illinois where it is too cold for peaches.

Bee-Culture and the Government

In the 1909 Report of the Secretary of Agriculture, Washington, D. C., appears the following paragraphic summary of the work done in the interest of bee-culture, which shows that substantial progress is being made:

> BEE-CULTURE.
>
> The work on bee-diseases has been continued. Samples have been received from many parts of the country, and the information gained from this work has been of great value, especially in the way of giving information to State legislatures which are contemplating the passage of laws providing for a much-needed inspection of apiaries. Notifications of the nature of bee-diseases, especially in cases of new outbreaks, have been of much value in preventing their further spread. New studies have been made of the structure and development of bees, of their activity, ot the status of bee-keeping, and, in co-operation with the Bureau of Chemistry, the Bureau of Entomology has begun work in wax-analysis.

Kalender Fuer Deutsche Bienenfreunde, 1910

This is the title of a calendar for the year 1910, intended for the use of German bee-keepers. It is a neat affair of 6x4½ inches bound in cloth, and containing nearly 200 pages, edited by Dr. O. Krancher, who is the editor of Deutsche Ill. Bztg., at Leipzig. Both paper and printing are excellent.

For each month there is a page occupied by a calendar, the rising and setting of the sun being followed by a blank in which to record the temperature of each day. Then follow 2 or 3 pages of instruction for the work of the month, and 3 or 4 blank pages for making records. Articles by leading German bee-keepers occupy 85 pages. Especially interesting among these is one by Alex. Schroeder, of Trieste, Austria, who writes in an entertaining manner of his visit to some American bee-keepers.

For convenient use there is attached to the book a pencil. This might be expected to write good German, coming directly from Germany, but alas, in the fingers of this deponent it will write only English, and none too satisfactory English at that.

An Appeal to New Jersey Bee-Keepers.

At the last annual meeting, on December 18, 1909, in Trenton, of the New Jersey Bee-Keepers' Association, our Foul Brood Bill was thoroughly discussed, section by section, and approved, and the membership present determined to do all they can to get the Bill enacted into law at the present session of the Legislature.

But there remains much to be done by all other bee-keepers in the State. In the first place, we would like all other members who have not done so to send us their annual dues of 50 cents for 1910, and ask for a printed copy of our Bill. Then we want all the other readers of the American Bee Journal to join our Association. Send us the annual dues of 60 cents, and get a copy of our Bill.

If there are any readers who can not see fit to join us, we would like to have them write us, enclosing stamp, asking for a printed copy of the Foul Brood Bill, and tell us if there is any disease among their bees, or in their neighborhood, or if there are any careless bee-keepers around them, or if there are any box-hives.

We are asking New Jersey readers to join our Association, as the larger our numbers the greater prestige it will give us in asking for a Bill. If only a few ask for this Bill, it will look as if they were trying to create an office for one of them. Then the Association needs more funds to carry on the work properly. There is considerable expense connected with getting a new piece of legislation enacted like this, such as postage, printing, telephone costs, traveling expenses. It is not fair that this should be borne by a few bee-keepers, as the law will benefit bee-keepers throughout the whole State.

By the time you read this our Bill will have been introduced. We want every New Jersey reader of the American Bee Journal to write his Senator and Assemblymen from his county to support our Bill. Write a short, business-like letter. Explain briefly what foul brood is, that it is a germ disease, how it spreads by infected honey, what danger the careless bee-keeper is, and how our Bill will eradicate the disease. Compare our interests with the dairyman's interests, and explain that the bee-keeper's property has as just a claim to protection against contagious diseases as the cattle-raiser has to protection of his herds against contagious diseases, by legislation. (We have laws protecting cattle against contagious disease.) Mention further that California, Colorado, Idaho, Michigan, Nebraska, New Mexico, New York, Ohio, Texas, Utah, Washington, and Wisconsin, have foul brood laws; that Connecticut and South Dakota passed foul brood laws last winter and other States are trying to do so.

We would like to ask especially those interested in bees in Essex County, Hudson County, and Union County, to see, and to write to, their Assemblymen and Senators from their respective counties. Those three counties contain a majority of the members of the Assembly, therefore we must get them in favor of our Bill. *Without the favorable action of the Assemblymen from those three counties, our Bill will fail.*

I trust this will be our last effort, and that we will succeed as, indeed, we will, if each bee-keeper will do his part.

Join our Association at once.

ALBERT G. HANN, *Sec.-Treas.*
Pittstown, N. J.

[The following is a copy of the proposed New Jersey Foul Brood Bill:—EDITOR.]

AN ACT

For the suppression of contagious or infectious diseases among bees in New Jersey by creating the office of Inspector of Apiaries, to define the duties thereof, and to appropriate money therefor

SEC. 1.—BE IT ENACTED *by the Senate and General Assembly af New Jersey* that the Governor shall appoint a competent Apiarist for a term of three years, recommended by the Executive Committee of the New Jersey Bee-Keepers' Association, as State Inspector of Apiaries, who shall, if required, produce a certificate from the Governor that he has been so appointed. He shall be subject to summary removal for neglect, incompetence, or malfeasance in office on complaint of the New Jersey Bee-Keepers' Association, or of twenty persons who are actual bee-keepers, his successor to serve for the balance of his unexpired term.

SEC. 2.—Said Inspector when notified, in writing, of the existence of foul brood or any other infectious disease of bees by the owner or caretaker of an apiary or by three disinterested taxpayers, shall inspect all reported apiaries and all others in the same locality, and if satisfied of the existence of foul brood or any other infectious disease, shall give the owner or person having charge of any such apiary full instructions as to the manner of treating them. Within a reasonable time after making the first examination the Inspector shall make a second examination, and if the condition of any ot the colonies affected is such as in his judgment renders it necessary, he may personally treat the disease, or, if in his opinion it is necessary to prevent further spread of the disease, and the owner or caretaker neglects or refuses to treat them according to the instructions of said Inspector, then the Inspector may burn or otherwise destroy such diseased bees, combs, or other material that might cause the spread of the infection.

SEC. 3.—Said Inspector of Apiaries shall have access, ingress and egress to and from all apiaries or places where bees are kept in this state and any person or persons who shall hinder, resist, impede in any way the Inspector in the discharge of his duties shall on conviction be liable to a fine of not more than $50, or not more than 30 days in the county jail.

SEC. 4.—Said Inspector may, in his discretion, order any owner or possessor of bees dwelling in box-hives (being mere boxes without movable brood-frames) in apiaries or localities where foul brood or other infectious disease exists, to transfer such bees to movable frame hives within a specified time and in default of such transfer, the Inspector may destroy or order the destruction of such hives and bees therein.

SEC. 5.—Should any owner of. keeper of, or other person having diseased bees or their larvæ, or of any infected hives of combs, appliances or utensils for keeping bees, sell, barter, or give away or allow the same to be moved, such person shall be guilty of a misdemeanor and upon conviction, such person shall be fined not less than $10 nor more than $25.

SEC. 6.—Should any person whose bees have been destroyed or treated for foul brood, sell or offer for sale any bees, hives, combs or appurtenances of any kind after such destruction or treatment unless authorized to do so by the Inspector, or should he expose in his bee-yard or elsewhere any infected comb, honey, or other infected thing or conceal the fact that such disease exists among his bees, such person shall be guilty of a misdemeanor, and upon conviction such person shall be fined not less than $10 nor more than $50.

SEC. 7.—Said Inspector must read over, deliver, or have delivered a copy of this act to every owner or keeper of bees before proceeding against him for any violations of this act.

SEC. 8.—The Inspector shall make a full report to the Governor at least once a year, stating the number of apiaries inspected, the number found to be diseased, and the number treated and such other information as he may deem important, which report shall be published in full.

SEC. 9.—There is hereby appropriated out of any moneys in the State Treasury not otherwise appropriated five hundred dollars per year for the suppression of contagious diseases among bees in New Jersey.

The Inspector shall receive five dollars per day and traveling expenses for actual time served, which sum shall not exceed the moneys hereby appropriated to be paid by the State Treasurer and said Inspector shall be authorized to deputize a known competent apiarist to act in his stead or to assist him as he may need at a salary of $3.50 per day and traveling expenses.

Sec. 10.—An emergency exists, and this act shall take effect immediately after its passage.

Approved by the Executive Committee of the New Jersey Bee-Keepers' Association.

J. H. M. Cook, *Pres.*
Albert G. Hann, *Sec'y.*
E. G. Carr, 1*st Vice-Pres.*
Wm. E. Housel, *2d Vice-Pres.*
W. W. Case, *3d Vice-Pres.*

The National Association

Through a letter received Dec. 27, 1909, from General Manager N. E. France, Platteville, Wis., we learned that the membership of the National Bee-Keepers' Association was 3520 at that time. Also that 1280 of them were in arrears on their annual dues. We hope that all who are owing will pay up at once. And then, it is the new president's ambition to have a membership of at least a round 5000 by the next annual meeting. If the 1280 pay up, and all the balance of 2240 renew as their dues expire, then there would be needed just 1480 more new members to make the desired 5000. That is not such a large number to secure in 8 or 9 months, is it?

We hope that every local bee-keepers' organization on the continent will join the National in a body, which can be done at a rate of 50 cents per member. The officers of such local associations should try to have this done. Both the Illinois State and the Chicago-Northwestern did this recently. As the Illinois State Bee-Keepers' Association has the largest membership of any State organization of bee-keepers, it naturally has the largest membership of any State in the National. As there are many conventions of bee-keepers to be held soon—such as the Wisconsin, Michigan (and Minnesota has just met)—there should be a large addition to the National's membership from these sources. And then, if each affiliated local organization would make an effort to increase its membership, that would also help the National.

It requires both money and members for organizations to do anything worth while these days. The National has done a great work during its 40 years' existence, and ought to be able to go on now and do even greater things for its members in the future. But let us first secure the membership and a full treasury, then its officiary can plan to do some of the needful things for beedom that only a large and influential organization can do. We are sure that, in the meantime, any of its officers will be glad to receive any suggestions that may be thought to be helpful in any way.

The 50th or Jubilee Year

The American Bee Journal was started in January, 1861, so 1910 is its 50th or Golden Jubilee Year. Samuel Wagner was its founder and first editor. The year 1873, Rev. W. F. Clarke was editor, and beginning with January, 1874, Thomas G. Newman became its owner and publisher. He continued until June 1, 1892, when the present editor and publisher purchased it, and has ever since continued. We really began work in the American Bee Journal office April 1, 1884, so that we have been connected with it for over 25 years.

And this is its 50th or Golden anniversary year! It should be a great year in many ways for the "Old Reliable," as many of its friends have come to call the American Bee Journal.

First, we desire very much to increase its circulation. It seems to us that it should have the largest circulation of any bee-paper in all the world. It is entirely independent of any bee-supply business, and in every other way. It believes fully in the "square deal" principle, and means to give such to every person with whom it has to do. We believe those who know us best, know that is true. We want only what is right.

Again, we wish to increase the advertising patronage of the American Bee Journal. We want only clean, honest advertisers represented in its columns. We will not knowingly have any others.

Now, we are going to ask those who are reading the American Bee Journal to help. We would like to have each present subscriber, as far as possible, send us one or more *new* subscribers between now and April 1, 1910. Surely, that can be done in 3 months. And we don't ask you to work for us for nothing. We offer many good premiums for doing such work, as will be seen from time to time in these columns.

We have not said very much as to the contents of the American Bee Journal for 1910. That is hardly necessary for those who have read it regularly; they *know* that what it *has* contained right along is a good indication of what is to follow. The full year's index in the December number shows what appeared during the past 12 months.

Let us send you some sample copies with which to solicit subscriptions, and see if you cannot easily get one, if not two, new readers for the American Bee Journal for 1910, even before April 1st. We believe most of you can do it with little effort.

Shall we not all, both publisher and subscribers, co-operate during this year in a way that shall make the American Bee Journal's Golden Jubilee Year the best in all its long and interesting history?

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

The Chicago-Northwestern Convention

Well, the Chicago-Northwestern convention is past and gone—only a pleasant memory. A good convention it was, too. The only sad thing about it was the absence of so many familiar faces. Mr. Dadant, the Roots, Hutchinson, Mr. France, the Dittmers, Mrs. Stow, and a number of others. We surely missed them, one and all. We had the pleasure, however, of seeing a number of new faces, among them two of Mr. Dadant's sons (Louis and Maurice), one of whom, Mr. Louis C. Dadant, was elected secretary and treasurer of the Association.

There were 17 ladies present. Not so bad a proportion of the fair sex, was it? And they showed quite as much interest in the convention as their brothers, although the brethren did most of the talking. Sometimes the president had his hands full to keep two or three of them from talking at a time. And yet they talk about women always doing all the talking!

Miss Stewart, the lady who reported for the convention, must surely have found it hard work—part of the time, at least—to keep things straight. I wonder which she thinks it easier to report for, men or women. I really do not remember seeing, at any time, two of the women struggling to speak at once. Just score one for the women, please.

One of the interesting features of the convention was Mr. Ferguson's demonstration with his uncapping machine. It surely did the work in a twinkling. It was a pleasure just to see those frames slip through the machine and come out perfectly uncapped on both sides of the comb. If we worked for extracted honey, I would want a Ferguson machine.

A topic discussed, which seemed to be of vital interest to the entire convention, was European foul brood. It is gaining such headway that unless something is done to check it very soon, it threatens to wipe out the entire bee-industry in Illinois. Oh, for a foul-brood law!

I was very much interested in a conversation I had with Miss Mathilde Candler, a Wisconsin bee-keeper of no small experience. She said, "I discovered diseased brood in quite a number of my colonies, and was convinced they had foul brood." Then she told how she concluded that she must bury all affected colonies. How she went to work and dug many weary hours until she had a large hole ready for them. After sleeping on the proposition, things did not look quite so discouraging, and she concluded that she was not quite ready to bury her bees alive, after all—at least not without giving them a fighting chance. So she sent a sample of the diseased brood to Mr. N. E. France, and he sent back the joyful news that it was not foul brood, but *pickled brood.*

She was more fortunate than some of the rest of us. What particularly interested me was the way she faced the situation. Wasn't she plucky to tackle digging that big hole, all by her leelane self.

But, really, I can't tell you all the good things of the convention. How I wish every lady bee-keeper in the land had been there to see and hear for herself. Why can't we have more lady bee-keepers at our conventions?

Honey for Chapped Hands

Mme. Qui Vive advises the use of honey for chapped lips, thus, in the Chicago Record-Herald:

> If you don't happen to have anything else in the house to apply to chapped lips, try honey. It is very soothing, and any time you don't want it there you can eat it. The flavor is preferable to that of cold cream.

The Bee a Symbol of Industry

The Youth's Companion prints the following paragraph which shows that the German housekeeping sisters still consider the bee as a symbol of industry:

> The busy bee is not so persistently held up as an example to girls as it once was. But there are some women in New York who still believe in it. The German Housewives' Society gives badges of honor to model servants every year. Twenty-five who had been two years in their places received golden bees the other day—the symbols of consistent industry.

Honey-Cakes

Clara Van Buren, of Elgin, Ill., gives the following in the Chicago Record-Herald:

> Melt one-fourth a cup of butter. Add one cup of strained honey. Let cool, then add the grated yellow rind of a lemon, one teaspoonful of lemon juice, two ounces of sweet almonds, blanched and chopped fine, one-fourth a teaspoonful of mace, half a teaspoonful of soda and two cups and a half of flour sifted together. Mix thoroughly, then set aside, covered, in a cool place for 12 hours. Roll into a sheet half an inch thick, cut into squares and bake about 20 minutes in a moderate oven. When baked brush over the tops of the cakes with a cup of sugar and half a cup of water, boiled to a thick syrup. Let the syrup cool slightly before using.

Honey-Production in India

Mrs. M. C. Mason, a missionary at Tura, India, writes Gleanings in Bee Culture as follows:

> There is not much inducement to bees to make any amount of honey here, as they can eat directly from the fresh flowers; still, they do produce some very nice honey, and once in a while we get some that is eatable. If we could get it first hand or in the comb it would be all right; but the natives are much given to straining it through any cloth, and that may be one taken from off the body, often so dirty that Mrs. Root would not allow her floor to be scrubbed with it.

The likelihood is that the bees in India are just as eager to store honey as their sisters in the farther North. A colony here with 100 pounds of surplus on the hive works just as hard as if no supers were there, so long as it has room to store. However it may be about "inducement" for the bees, there would be little "inducement" for humans to eat honey strained in the manner mentioned. Ugh!

Bee-Keeping in the Public School

If bees as teachers of children in the public schools were appreciated elsewhere as they are in School No. 190, in New York city, there would hardly be a large school in the land without at least one colony of bees. The school mentioned has 4 colonies. It is probably generally supposed that the only object in having bees as a study for the pupils of public schools is to learn something of their natural history. "Nature study" is nowadays quite a fad, and a good fad it is. But according to the ideas of Miss Goldie, the principal of School No. 190, the pupils get from the bees something of vastly greater importance than anything that can be classed under the head of nature study. Listen to what she said to a reporter of the New York World:

> "It is astonishing what the children have been able to get out of watching and studying those insects. In all my years of teaching I have known nothing that would so develop a child's power of observation and ability to relate, orally or in writing, a mass of true scientific information derived from actual investigation. Almost any child in the school can, at a glance through the glass, tell the old bees from the young ones, picking them out from thousands, and they know that by litttle characteristics that the ordinary eye would be stone blind, too.
>
> "It is worth something to get nearly a thousand girls in such a frame of mind that they are frightened by the buzzing of an insect that can sting. It is worth something to get a herd of boys in such a frame of mind that under no circumstunces would one of them step on or otherwise intentionally kill or injure a useful insect of any sort. If any boy in this school ever finds a bee lying outside numbed by the cold, he picks it up and brings it in to the hive.
>
> "In rainy or stormy weather when bees are interrupted in their work, they make a noise that is much more threatening and angry than the contented hum with which they do their task in pleasant weather. The children have observed that, too, and of their own accord made comic little parables to the effect that they ought not to grumble about the school work that they have to do at home.
>
> "The children have drawn their valuable lessons in loyalty to the school, the city and their homes from the care and devotion with which the bodyguard looks after the queen of the hive. We have had two swarmings caused by rival queens, and the pupils know all about the results of factional war in a hive. They know that the old-fashioned expression, 'neater than wax,' is based on the fact that no creature is cleaner than the bee. A bee that is sick or dying always knows and voluntarily goes out of the hive to die rather than allow her dead body litter the quarters of her fellow-workers.
>
> "The pasteboard cases in which we put the boxes of honey taken from the hives are made by the boys of the school as part of their shop-work, and there is no part which they do better, because that appeals to them as being very practical and commercial so long as they know that they are also interested in the production of the article that is to go in the cases. And of course the fate of the drone offers such an obvious lesson that the smallest youngster in the school can absorb it without much teaching."

Southern Beedom

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

Bulk Comb Honey---The Hives and Super Arrangements

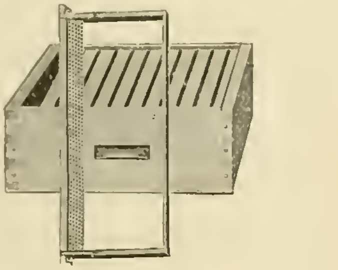
The beauty of the whole thing is that any kind of hive can be used for bulk comb honey production. So, no matter what kind, style, size or shape hives you now have, whether you have been unsuccessful with them in producing section honey or not, or whether they are not just suited for extracted honey, makes no difference. Any hives that can be made to receive a shallow super above can be converted into a bulk-comb-honey hive, so that no matter what kind of hive one now uses, or how many one has, the change to bulk-comb honey will be very slight as compared with the advantages of its production as a more profitable venture.

Of course, I might admit that some hives are better than others, no matter what kind of honey is produced, and although this is a fact, it is nothing compared with the difference in hives for the successful production of comb honey in the small, miserable 1-pound section boxes. The majority of the hives now in use are of standard size and variety, and such that allow tiering up of supers above, especially hives that have been used for section-honey production. With these the supers can even be converted into shallow-frame supers—just the ideal for bulk comb honey.

Many bee-keepers are already using shallow frames for extracting purposes, and hence need make no change in their hives and super arrangements. If the deep frames are used for extracted honey, it would be advisable to turn these sets with deep bodies into brood-chambers for increase whereon shallow supers can then be added. The deep or Langstroth frames, or like ones, are unsatisfactory for our purpose, being too deep, and a deep super of them is too much room for most satisfactory results; besides, they do not allow the use of full sheets of thin super foundation; and possess other disadvantages.

The majority of hives in Texas are of the 10-frame Langstroth size, on which we use shallow supers as shown in Fig.

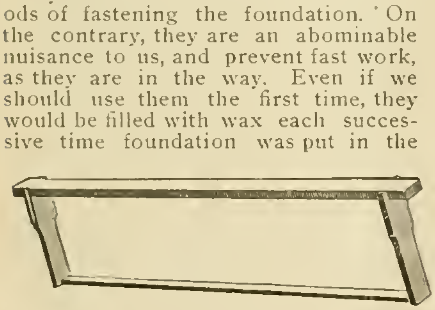
1. These supers are made in either 8 or 10 frame sizes, so they can be obtained either for 8 or 10 frame Langstroth hives, if you have them. In our system we prefer the shallow Hoffman self-spacing frames, as a self-spacing frame is absolutely essential for our purpose, as will hereafter be explained.



2.—Shallow Super for Chunk Honey

Fig. 2 represents one of our supers with 10 frames. The super is 5¾ inches deep, while the frames are 5⅜ inches in depth. These hang on plain, square shoulders or rabbets without tins. No tin rabbets are necessary. The frames, 5⅜ deep, as shown in Fig. 3, are the regular shallow Hoffman style, as put out by most manufacturers, except that they differ in the top-bars used. As made regularly at the factory, they are too wide. These are 1⅛ inches wide, making the spaces between the top-bars of the frames too narrow for best results, as the passage-way from one super to another is cut off too much, and discourages the bees more or less, so that a loss in surplus honey results. They are made only ⅜ inch thick, and with a deep, wide groove for inserting foundation-starters, so that they are too weak, and sooner or later sag, and allow bur and brace combs to be built between the tops and bottoms of the several supers.

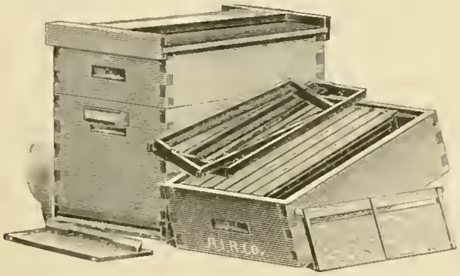
Our frames have a narrower but thicker top-bar, full ¾-inch wide, and full ½-inch thick, which makes the frames much stronger; no sagging results, and the trouble with bur combs is thus prevented. We have no groove for foundation-starters in these top-bars, as, first, it only weakens them, is an extra expense, and then we absolutely do not need them with our methods of fastening the foundation. On the contrary, they are an abominable nuisance to us, and prevent fast work, as they are in the way. Even if we should use them the first time, they would be filled with wax each successive time foundation was put in the frames, and our experience has long taught us that it did not pay to clean out these grooves. How the foundation is fastened in them will be described later.



3.—Shallow Frame for Chunk Honey.

In answer to numerous enquiries from those wishing to procure the proper supers for producing bulk-comb honey the coming season, we recommend the above-mentioned supers either 8 or 10 frame size, as needed for the hives already in use. It would be well to state here that when ordering these, special mention about the kind of top-bars wanted will have to be made, giving the desired width—¾-inch, full, and depth, full ½-inch, not omitting *that no groove for foundation is wanted*—or the regular wide ones will be sent.

Here, and by those who use them, these frames are known as the "Scholl" frame, and several of the large bee-keepers' supply manufacturers have been asked "to put the Scholl frame on the market." This is in all respects nothing else but the shallow 5⅜ Hoffman self-spacing frame, *but with the ¾-inch wide, and ½-inch thick, top-bar, without a groove* to weaken it. This is the frame that we have advocated for a number of years, and we have several times called attention to it, especially for use, not only for bulk comb-honey production alone, but for the shallow, divisible brood-chamber hives, which we use extensively in our work. As this hive has given us the best satisfaction and results in the production of bulk-comb honey for many years, I will describe it in the next article, for the benefit of those who desire to procure new hives, or for others who wish to follow my system of work this year.



1.—Hive and Super for Chunk Honey.

How Far Do Bees Fly ?

It would seem that from all that had been written and said on the subject of how far bees will fly for honey, there is but little left to be said or written on the subject, still this is like the wintering problem in the North—it's one of the subjects that just won't down.

I am ashamed to confess it, but it is one of the few things connected with apiculture that the more I experiment the less I really seem to know. As it is a subject that all bee-keepers are more or less interested in I, for one, should like to see it thoroughly discussed by all, this winter, through the columns of the American Bee Journal. I think there is little danger of the subject becoming stale and of little interest to the readers. Away back in my boyhood days, when I first started with bees in a practical way, I thought I *knew* they would fly from 4 to 6 miles, and store honey at a profit; and I can't help having the same feeling to some extent even yet. But when I come to read the testimony of such men as E. R. Root, Louis H. Scholl, C. P. Dadant, J. L. Byer, and a host of others I could mention, *all* claiming bees seldom fly over 1½ miles for stores, then, perhaps, I become somewhat in the plight of Josh Billings, when he said, "What's the use of a man knowing so much when half he knows isn't so?" In those days I lived in Johnson County, Tex., in what is known as the crosstimbers—a belt of timber reaching practically across the State where I lived. This strip of timber was about 10 miles wide, and I lived near the center. On either side of my home, at a distance of from 5 to 6 miles, was black, waxy, prairie land, which is very rich, and the natural home of the wild marigold and horsemint, which, at that time, were the principal honey-plants of north Texas. In the timber the soil was a deep, sandy loam, and I never saw a stalk of wild marigold growing there, and none of the kind of horsemint that furnished the famous horsemint honey of Texas years ago. But as stated, on the prairie, 5 or 6 miles away, these plants grew to perfection, and in almost endless quantities, and, in favorable years for their growth, these prairies were almost a bee-paradise. (They are now all in big farms, mostly planted in cotton.) My bees, in the center of the crosstimbers, worked freely on these plants on both sides of me.

Some might say, "Are you not mistaken? Is it not possible there were some patches of these plants not known to you, that your bees worked on much nearer, etc.?" I am not mistaken. I was brought up on the farm, and knew all the country for many miles around.

Others might still insist that the honey stored by my bees was from some other source, and not from these plants, as I thought. Here, again, I insist I am not mistaken, for when bees work on marigold they become dusted over with a yellow dust from the bloom, that looks very much like bees do that are at work on the goldenrod; and marigold honey is of a pinkish red, and has a flavor all its own. Then, when they work on the horsemint they become dusted on their backs, between their wings, with a dust as white as flour. It's no need to tell a Texan he doesn't know the flavor of horsemint honey. Not only that, I was the first to get the yellow banded bees in that part of the country, and I frequently saw them working on those plants 4 or 5 miles from the apiary, and they would store from 25 to 30 pounds of surplus honey per colony, each good year, from those plants. Then, if bees seldom go further than 1½ miles for stores, does it seem possible that such a great number of colonies could be kept in one yard and yet secure such yields of honey as the late E. W. Alexander secured? I confess it hardly seems reasonable to me. But when such men as I have mentioned above, say they have known bees to be in a starving condition, and good pasturage not more than 2 miles away, it causes me to wonder where we are at.

I could give other instances where I know bees went from 3 to 4 miles to work on smartweed bloom, but with the hope of seeing the subject more ably discussed by others, I will desist for the present. L. B. Smith.

Rescue, Tex.

I am well pleased with the American Bee Journal, as it has been a great help to me.

John G. Wagner.

Route 3, Elkader, Iowa.

Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ont.

Late Bee-Flights and Good Wintering

The late flights already referred to should be a factor towards good wintering of the bees indoors or outside, and as all other conditions seemed favorable bees should come out in good shape next spring. There is just a possibility that there may be a little honey-dew in the hives—at least I am afraid of a little among my own bees—and if there is much of that article present, of itself it is sufficient to overbalance all other favorable conditions grouped together. At least that has been the experience in one or two years when the honey-dew was much in evidence. Indeed, the result of trying to winter bees on that substance was so disastrous that most of those who passed through the experience would take no chances if they knew for sure that there was much of the stuff in the hives. This year, if it is present it is in small quantities, and came in at the same time that the buckwheat was in bloom.

Good Fall Bee-Weather

Whatever the weather conditions may have been over the country as a whole during the past autumn, Ontario can certainly go on record as having had ideal weather during that period, at least in so far as it applies to the interests of bee-keeping. Although some men who winter their bees in the cellar, had at the time of the Ontario convention (Nov. 9th) already placed them in winter quarters, yet the great majority of bees intended for inside wintering were outdoors at a later date than usual. Only 40 colonies of mine are being wintered in the cellar, and as they had continuous flights more or less all through November, they were left outside till Dec. 4th. At that date they were in fine condition for going in, having had a good flight but two days before, and as there was no snow on the ground, the hives were nice for handling. The day was warm enough for the bees to fly, but having had a good flight such a time before, they gave little trouble when being carried in. After being placed in the cellar, they came out of the hives a little, but in the course of a couple of hours they quieted down nicely.

November 28th the bees carried in some pollen from the few venturesome dandelions that were in bloom, and this I believe establishes a record for our bees in the matter of late gathering of pollen. Whether the bees I put in the cellar on Dec. 4th would have been better off if they had been in a month earlier, is something I cannot know for a certainty, but with conditions as they were, we certainly felt safer at the time with the bees outdoors.

As to the late-blooming dandelions mentioned as the source of pollen gathered so late in the season, it is only in 3 months of the year (January, February, and March) that it is impossible to find any of the flowers of this true friend of the bee-keeper, as I have seen during the past years, at least a few blooms in all the other 9 months of the calendar. True, it is only during May, and sometimes in early June, that the blooms are in great enough quantity to amount to anything, yet the flowers that show up in November, and this year in December, help to make the more dreary season of the year more pleasant.

After all, it is not only the things that bring in the dollars, that help to make life inviting, but the late bloom of the dandelions in November and December just as truly answer their purpose in helping to carry out the Divine plan as do their more numerous sisters that show themselves in such profusion during May and June.

Honey Crop Sold Early in Ontario

While we had in our province, this past season, a fair crop of honey, for some reason the supply seemed to disappear in record time. No question but that the Northwest provinces took a great deal, but aside from that the honey being of such a superfine quality had no doubt a great influence in increasing home consumption. These and other factors combined, have been the means of cleaning out the supply of honey to such a degree that some of the large dealers are now sending out inquiries for more supplies—an unprecedented condition for the time of the year, in so far as I have any recollection. Prices have been good, and as a natural sequence you do not hear of any bees being offered for sale here in Ontario this year. Everything considered, such as prices, demand, etc., coupled with the more general recognition of bee-keeping as a *business*, certainly seem to indicate fair things for the future for the apiculturist, and it is not to be wondered at that in this strenuous competitive age more are being attracted to the calling each year.

Speaking of the demand for honey this year, my experience would certainly lead me to believe that honey is rapidly growing into favor as a staple article of food. Last year I kept about double the honey for home trade, as compared with other years, and as a result I was sold out before Dec. 1st. This year I thought to be on the safe side, and kept a half more than last season, and at this date (Dec. 13th) I am entirely sold out. By "home trade" I mean only what is sold or ordered from the house, as I have not solicited a sale for honey for two years.

It certainly is much more pleasant to have people anxious to buy honey at a fair price than it is to be forced to go begging for sales at a ruinously low figure, as was the case not so many years ago.

And just here I might mention that after making due allowance for higher prices prevailing on nearly all kinds of products, better times and increased consumption of honey as a staple, one of the main factors in helping to bring about these better conditions for the apiarist is the existence of the so-called "honey exchange" here in Ontario—an institution that is justly gaining the confidence of nearly, if not all, of the principal producers.

Ontario Experiment Apiary at Guelph Hereafter

> The Experimental Apiary, of which Mr. Morley Pettit is the head, is about to be moved to the Guelph Agricultural College, and become part and parcel of that institution. This is as it should be. There is no reason why apiculture should not have reached the same place of importance at the College as poultry-keeping and butter-making. The start is being made very late, but it is never too late to get right. The professor in apiculture should be a necessary part of the College staff, as is any other professor there. Bee-keeping offers a career as inviting as poultry, and can often be combined with it. If Mr. Pettit is given his proper place at the College, he will have no time to go out hunting for foul brood.—*Canadian Bee Journal.*

The foregoing speaks for itself. The change contemplated is no doubt a good one, and Mr. Pettit will find many facilities there at the College that were absent at Jordan Harbor. In Mr. Pettit we have an efficient helper, and judging from the proceedings at the late convention of the Ontario Association, he will have plenty to do, *i. e.*, if he can decide on what will be the most profitable line of investigations to carry on.

At the convention Mr. Pettit asked for suggestions from the members assembled, as to what they might desire to have done in the way of research in apicultural work. It was most amusing to note the different ideas of the many who expressed opinions on the matter, and I am afraid that Mr. Pettit came to the conclusion that, after all, he would have to depend mostly upon his own judgment in deciding the character of the work to be undertaken. For instance, some thought that the more scientific side of bee-keeping should engage the attention of the Provincial apiarist, in his experiments and investigations, arguing that it was time the men who were in the business for a living should be receiving some help, as those were the ones who had borne the brunt of the fight in getting needed legislation, etc. Others thought the more simpler experiments should receive attention, such as, for instance, deciding the different questions as to wintering, indoors or outside, spring management; whether it was advisable to stimulate or not in the early spring;

and the hundred and one different questions that confront the beginner.

As to what effect the decision of the Provincial apiarist might have on old bee-keepers, regards his solution of these little matters, as was amply illustrated right in the convention, Messrs. Miller and Sibbald, two of our very successful bee-keepers, happened to be sitting side by side, and it was pointed out that Mr. Miller was strongly in favor of having packing under the bottoms of the hives when wintering bees outside, while, on the other hand, Mr. Sibbald would have none of the packing under the hive, as he deemed it to be simply useless. The writer has had hives for quite a few years in the same apiary, about an equal number packed both ways, and cannot see a particle of difference in favor of the packed bottoms, so would naturally dispense with them in making winter-cases for the future.

I ventured the opinion that no matter what the decision of the Provincial apiarist might be on the question, both Messrs. Sibbald and Miller would continue doing just as they have been doing, and as there was no dissent from this assertion, I make bold to assume that all other experiments along these lines would be received the same way, and all would continue doing as they were accustomed to, provided, of course, that such practices had been giving good results.

Bees Wintering on Buckwheat—"Gambling"

My own bees are heavy with buckwheat stores—so heavy, in fact, that some of the sugar bought for feeding was not all used, as it seemed like feeding for nothing when the hives were already so heavy. If there should be bad results from the buckwheat, then next spring we will be wishing that more sugar had been fed—if the bees winter well, then we will be congratulating ourselves on saving a few dollars. Such is life, and if we only always *knew* just what was going to occur, how we would manage!

But if all the uncertainties of the business were removed half of its charms would also disappear, as I have an idea that these same uncertainties lend spice and interest to the pursuit, and help to make of true bee-keepers the enthusiasts that they generally are.

While in Cobalt last summer, speaking with Mr. Hand, the writer marvelled at the gambling spirit that seemed to be so prevalent in so many of the mining ventures in that country. The retort came at once, "A few weeks ago you did not know if you would get a pound of honey, when all at once weather conditions became just right, and in 6 days your bees gathered for you over 20,000 pounds of honey. What could you find in the mining country here, more of a gamble than bee-keeping is?" As my friend was formerly in the bee-keeping business, and thoroughly familiar with all its details and uncertainties, I was rather at a loss to answer him at once, other than to remark that at all events the "gamble" in the bee-business was at least legitimate—something that was not always the case in mining stocks.

Call it what you may, the gamble of uncertainties of many conditions uncontrollable by the apiarist helps, as I have already intimated, to make the calling one of the most fascinating pursuits available to us sojourners on this mundane sphere—yea, make it possible for at least one body of workers so to enjoy their chosen vocation as not to be in sympathy with the commonly expressed idea that each one thinks "the other fellow has always the best job."

Contributed Articles

Bulk Comb Honey Production

BY F. GREINER.

I am heartily in favor of bulk comb honey as advocated by Mr. Scholl, of Texas. Although we are well rigged up with our comb-honey supers, and its being a nice, clean job to handle comb honey in sections, as compared with the Texas or Scholl method of producing honey, yet it may be wise if we Easteners would look into this method of comb-honey production.

As I understand it, the honey is produced in shallow unseparatored supers with ordinary inexpensive frames, said shallow frames are either filled with very light comb foundation or just starters, at the pleasure of the producer. In either case it will be much easier to start the bees working in the supers than it is when using section supers. When I was using undivided supers, many years ago, or at the beginning of my bee-keeping, it seemed so easy to get the bees to take hold in them; now, with the modern super divided into 24 little, separated rooms, it requires all the skill of an expert to obtain anywhere nearly the same results.

Our Texas friends fill up their cans or pails with extracted honey after all the comb honey the receptacle will hold, is put in. I am just a bit afraid to do this. With our honey here, and with our cold weather, that honey would soon granulate, and then we would be in a pickle, or rather a predicament, from which to extricate ourselves without incurring a loss, might bother us. I wonder whether the Texas honey does granulate under such conditions; and if it does, how our friends guard against the difficulty. Of course, by not filling the receptacles till wanted, and using extracted honey for filling in, which had been liquefied before, or had been heated to about 140 degrees Fahr., and cooled again, a part of the trouble might be avoided.

I am just a little skeptical as to the wisdom or advisability of filling the interstices with extracted honey—not sure that our customers would like that.

This kind of comb honey and extracted honey combined would very likely have to be all sold in a retail way, directly by the producer to the consumer. This would necessitate the adoption of a small can or pail suitable for such trade. If I remember rightly, the bee-men in Texas use a large can with a 4-inch screw top. It seems to me that the "fishing out" of the combs, dripping with honey, must be a mussy, disagreeable job, and I doubt if any groceryman here could be induced to go into it. We would like to hear from our Texas people, what their experience is along these lines.

I am quite sure many of us bee-keepers of the North and East might find sale in our respective vicinities for a great deal more honey than is now consumed, if offered in this cheaper form. It cannot be denied that the majority of people prefer comb honey to liquid honey. I have labored hard for 30 years to create a liking for extracted honey. I have always offered only the very best white and good flavored honey that could be produced in my vicinity, but the fact is, by far the majority of people prefer the most inferior grades of comb honey to the very finest honey in the liquid form. Calls for a dollar's worth of cheap comb honey are very frequent, and all my honey from *unfinished* sections is cut out and put up in tin pans—a dollar's worth in each—and thus sold. To satisfy this demand for cheap honey, I never have enough to go around.

Any experienced bee-keeper knows that bulk comb honey can be produced, in individual supers referred to, for a good deal less than even the unfinished section honey in the divided supers; and the quality would be very much in favor of the former. We would have good reason to expect an increased demand for the new product. Whereas formerly my sales from the unfinished sections amounted to from $15 to $20 each season, this might be tripled the first year, if it was noised about that such honey was for sale. The demand would be growing from year to year; although I would not expect to see the time that my whole output could thus be disposed.

"*A dollar's worth*" seems to be about what many people would prefer to buy at a time; even our village customers have fallen in line with the farmers, and will expend a dollar for honey when a larger or more costly package, or even a smaller one, would not find favor. The question then arises in my mind, How many pounds of this mixed product can I afford to give for one dollar, taking 14 cents as the basis of the price of section honey, and 8½ cents for the extracted; also taking into consideration that these last-named prices are wholesale; while our new product will be sold in retail?

I wish I knew how well the friction-top cans, as offered by the Canners' Can Co., of Chicago, at $7 per 100 for the 10-pound size, would suit. I am inclined to order a batch for a trial, anyhow.

This is a subject which might be discussed at bee-keepers' conventions this winter. Many of our producers may scorn the idea of giving this matter a trial, but if we by adopting the Texas method, and dispose of a portion of our honey in the home market, we would make a gain by keeping that much honey out of the usually glutted city market, and this in turn might have the effect of raising the price of the commodity.

There can be no doubt that sooner or later the scarcity of suitable timber to make sections from, will force us to make a change in our method of comb-honey production. We would be wise if we so planned as to be independent of the basswood-timber supply.

Naples, N. Y.

Progress of Bee-Culture in Italy

BY C. P. DADANT.

The death, during the month of September, 1909, of two noted Italian apiarists, has drawn the attention of the bee-keeping world to that country and of the progress achieved by it in apiculture.

COUNT BORROMEO.

Italy, some 60 years ago, was a divided country, the greater portion of it being under the iron rule of the Austrian monarchy, a small part under the Pope's rule, and the remainder under other small rulers. The unification of the country by the overthrow of the Austrian power and the securing of an independence that was long sought, under the influence of the spirit of liberty set aflame by the patriotism of Garibaldi and his volunteer legions, gave an impetus to progress, and it is hardly to be doubted that Italy would not yet today be as progressive as she is, even in the culture of bees, were it not for the political progress achieved in the middle of the past century.

Germany had already achieved very important progress in apiculture when Italy came to the front; but Germany had the good luck of being the birthplace of two great apiarists—Berlepsch and Dzierzon—the inventor of modern methods and the parthenogenesis; not to mention a number of scientists who helped in discoveries in bee-anatomy. America followed the footsteps of Germany. To make sure of this, one needs only to peruse the first two or three years of the old American Bee Journal. But the pupil soon got ahead of the master, and at the present date the Dzierzon and the Berlepsch hives can not be compared in efficiency of manipulation to any of our modern hives. Langstroth was the man who set the pace here, by his inventions and his accurate researches.

Italy then took the cue. In the sixties, one of her leaders, Major Hruschka, invented the honey-extractor. But to use this machine a practical hive was needed. Both the German and the American hives were tried, and the latter, I believe, took the lead very promptly. In 1868, "L'Apicoltore," their national bee-journal, was founded. A Central Association for the Encouragement of Bee-Culture was organized. Let us bear in mind that Italy, like all the old monarchies, is composed of classes very far apart in social positions. The contadino or peasant, at that time, had no education; in many places he lacks education yet, but he is gaining slowly and surely. On the other hand, the nobility is among the most aristocratic of Europe. The Viscontis and the Borromeos trace their ancestry back to the middle ages. But it was among these aristocratic men that the progress began. They bent their energies in the most democratic fashion to the spread of what they recognized as progress, and proud as they were of their ancestry, they did not consider it a degradation to put their hands at useful work and to preach the gospel of progress to the uneducated. They mingled with the mass to teach new methods, and counts, doctors, engineers and ordinary tradesmen set themselves on a basis of equality before the little honey-bee. Is this not worthy of our consideration? Perhaps we can hardly realize what such a thing means, in a democratic country like ours, where all men are equal.

It would be useless and impossible for me to name all the men who made Italian bee-culture what it is today. Crivelli, Visconti, Lurani, Rauschenfels, Dubini (the author of a splendid treatise), Borromeo, Barbo, etc. The work of the last named, extensive microscopic studies, was brought to the reach of every one by the art of Clerici, who made beautiful lithographs of most of them, and these lithographs were published under the auspices of the Central Association. They were since re-published by the editor of the journal "L'Apicoltore," Rauschenfels, who is today upwards of fourscore years of age, but still on the path of progress.

COUNT BARBO.

Bee-culture in Italy has also been urged forward by the demand for Italian bees from all parts of the earth. But more than anything else the work of its translators has been beneficial. From the beginning of its publication articles have been translated for "L'Apicoltore," first by Dr. Dubini, later by others. Our American readers would be astonished to see how well acquainted the Italians are with the writings of Doolittle, Dr. C. C. Miller, A. I. Root, Hutchinson, and hundreds of others in America. In the same way they quote from German bee-culture, France, England, Belgium, Switzerland. There is not a magazine in the world which is more cosmopolitan in its make-up than "L'Apicoltore."

But, dear reader, do not infer from the above that the bee-keepers of Italy are *all* progressive. This would be a big error. Neither are the bee-keepers all progressive in America. It was lately found out by Mr. Holekamp, Secretary of the Missouri State Bee-Keepers' Association, that there are 42,000 bee-keepers in Missouri alone. How many of those are up-to-date apiarists? Not one-tenth I dare say. And Missouri does not hold the record for ignorance, for we have other sections of the country much farther behind. Dare we criticise other countries?

While the Steinheil trial was in progress in France, and our newspapers were throwing ironical jests at the rendering of justice in French courts, in our own country—in proud Illinois—mobs were dealing out lynch law to black and white alike at Cairo. While we look at the mote in our brother's eye, let us not forget the beam which is in ours, and bids fair to deprive us entirely of eye-sight.

Can we draw a moral from the action of the Italian noblemen who have so pushed bee-culture forward among the masses? Yes. They were only a handful who took hold of this work, but their united effort has done wonders. It is not so much the numbers of progressive men that cause steps forward, as the quality of the men who do this work. So in whatever line we see possibility of progress let us unite, work in harmony, and let us not leave a stone unturned which may help progress among our fellows.

Hamilton, Ill.

Southern California as a Bee-Country

BY W. K. MORRISON.

MR. EDITOR:—In answer to your query with regard to Southern California as a bee-country, I wish to say that my knowledge of it is not sufficient to allow me to pose as an authority. The general observations which follow may, however, answer your purpose for the present.

San Diego county is certainly the banner honey-producing county of the whole United States. Last season was a rather poor one for the bee-keepers, but the total honey crop was not far from 75 carloads, of which 50 carloads have already been shipped, and the remainder has been partially contracted for by Hamburg firms, which goes to show the Germans are willing to pay more for good honey than any other nation.

Imperial county was until recently a part of this (San Diego) county, but now it forms a sort of kingdom of its own; but a railroad is being rapidly constructed to connect that section with San Diego city, so that the latter will form the exporting point for that county, and possibly for all of Southern California and part of Arizona.

The prospects are good. Formerly high freight-rates and poor country roads held the bee-business back, but now the rates are dictated by the steamship people, who transport goods to Salina Crux, in Mexico, where they are transhipped to Port Mexico, in the Gulf of Mexico, and thence to New York, Liverpool, Southampton, London, Havre, or Hamburg. By this route there is not only a saving of freight-rates, but a saving of time as well. Even when the Panama canal is opened, five years hence, there will be no saving, as the Mexican route is about a week shorter. At present the time taken to New York or Liverpool is about 22 days. In shipping honey and beeswax these facts are important. The Cape Horn route has been entirely superseded.

Other features of the situation are the extensions of various railway lines. The Santa Fe is busily improving its road-bed by extensive alterations and improvements, so that its fast trains will travel straight through to Chicago without being remade. Los Angeles will simply be a whistling station on the way to San Diego. Not only so, but the Santa Fe intends to reconnect Temecala with Fallbrook so as to give it another through line via San Bernardino. This line would pass through an ideal bee-country. Various branch lines project out from San Diego, and extensions of these will soon take place.

One of these extensions is from Fosters Station on to Ramona and Warner's Hot Springs, and thence on to the Imperial country. This will pass through a great bee-country only partially developed. The reason for this extension is curious. It has been discovered that a section of country around Julian, in San Diego county, is great for producing apples, equal to, and probably surpassing, Hood River (Oregon), Idaho, Utah, Colorado, New Mexico, or any other of the famous apple-growing sections. I recently attended an exhibition of these apples in San Diego, and they were certainly worth a long journey to see. This little town of Julian can certainly surpass such famous apple States as New York, Michigan, or Arkansas. I saw such old-time varieties as Yellow Transparent, Early Harvest, Red Astrachan, Red June, Summer Pearmain, Ben Davis, Missouri Pippin, Nonesuch, Winter Pearmain, Winesap, Rome Beauty, Alexander, Spitzenberg, R. I. Greening, Maiden Blush, Bellflower, Northern Spy, and even a far-north variety like Wagner, grown to perfection. After the exhibition was over the apples were auctioned, and two boxes brought $18 each. That's going some. At present this apple section is without railroad facilities. Good apple lands, for this reason, can be readily obtained at low prices as yet. Moreover, it is a great section for honey-production—none better.

The new Spreckeles railroad from San Diego to Yuma, Ariz., will open up some entirely new bee-country. It jumps from the United States into Mexico half a dozen times, hugging the boundary line all the way. It is said to be an extension of the Rock Island system. If so, great developments can be confidently looked for. The population of San Diego has trebled in 9 years, and in all probability it will have 100,000 by 1915.

Another improvement that will work for the benefit of the bee-industry is the good roads movement. San Diego has recently voted $1,250,000 for road construction throughout the country districts. This will help the bee-keepers, as many are situated far from railroads, and have long, hard hauls, which almost render the work unprofitable.

Of late years conditions have improved for the small farmer. Poultry, eggs, etc., bring fine prices, and the mild climate renders the work pleasant and agreeable in every way. Turkeys bring 25 cents a pound, live weight, and the demand is unlimited. No business dovetails so nicely with the bee-industry as raising turkeys, for a California bee-ranch forms a perfect home for these liberty-loving birds. In fact, the conditions could hardly be improved. Fallbrook and Escondido are honey-shipping centers; they are equally great on turkeys.

As regards the price of land, there is no reason to pay fancy prices. I have heard of several bee-ranches for sale at what seemed to me very reasonable prices. The only way to see and understand this section properly, is to come over the Santa Fe to San Diego, and then make short trips back into the country. Conditions are different from what they used to be. Nice country homes can be obtained, surrounded with flowers, vines, figs, olives, oranges, lemons, etc. There is no need to rough it, unless you wish it. The school facilities are excellent.

Anybody can be suited as regards climate. If you want to live where there is no winter, locate along the coast. For a dry climate, for rheumatism or consumption, select a place 20 miles inland, and from the ocean's fogs, or back 150 miles on the Colorado desert. If you like a little winter weather, with a regular rainfall for crops, try a location 40 or 50 miles inland, with an elevation of 3000 to 4000 feet. There are some excellent health resorts for the afflicted ones.

Living is not expensive—not as expensive as in the Central States. Excellent cottages with all modern improvements can be had in San Diego at from $12 to $15 a month, and in small places still cheaper.

I mention this because many seem to think living expenses are high in California. Everything seems to be high in San Francisco, but the situation there is abnormal. For a large city, Los Angeles is a cheap place to live, all things considered. Another point is, there is work for all who want to work, at living wages, so that no one need be afraid to make the jump. California never was better, and more people would make it better, in my opinion. It will accommodate many more millions before being overcrowded.

San Diego, Calif.

Packing for Hives in Winter

BY LOUIS MACEY.

I have read everything I could get hold of on this subject, and have tried the "Three sticks across frames for bee-space—2 thicknesses of burlap, and then a super $^{2}/_{3}$ full of chaff as an absorbent or ventilating cover"—with satisfactory results, only I now tack the burlap to the bottom of the super, so if a nice day comes and I want to see how the bees are doing, I can lift the super off without spilling the chaff.

As to packing cases, however, I have seen nothing to fill the requirements that were not too expensive. Where one has a large number of hives ("store-boxes"), as recommended by a recent contributor, are not to be thought of, especially in a prairie country where people even buy laths at 40 cents a bunch *for kindling*: "store-boxes" command a premium, and there's not enough to go around; besides, no ordinary "store-box" is sufficiently weatherproof to keep the wind out and the packing material dry, as it should be kept; neither will a case made of boards, after the first year, unless well made out of good material and well painted, and such a case costs too much for the average bee-keeper.

So, while running my "thinkworks" overtime, I chanced to see a lot of tar-paper where a railroad grading gang had torn down a temporary stable. I picked up some 40 or 50 pieces about 7½ feet long, and thought I would try it. I first wrapped 5 or 6 thicknesses of newspaper around a hive, and then the tar-paper, tying with binder twine. I didn't like it; it looks like very *thin* protection, and if it breaks at the corners, or a piece gets loose anywhere, the wind will beat a tattoo with it that must be exceedingly annoying to the bees. So I quit, and fired up my "thinkworks" again, and finally evolved a case that will beat any other outdoor protection I have ever heard of or read of—wind-proof, rain-proof, non-conducting, and cheap enough for anyone. I never had any occasion to buy tar-paper, and don't know what it costs, but I know it's cheap, and I don't think it will cost 10 cents a hive to pack them snug.

In the first place, my hives are all (except 3) grouped in twos, *a la* Miller, and facing south, and were already "top-packed"—with chaff in the super, and cover put on loosely.

I happened to have a lot of short posts, and I set these, one at the south-east and one at the southwest corners of the 2 hives. I let one corner of the post come against the corner of the hive, and the rest stand out south as far as it would to shed the wind away from the entrance. A piece of 1x6, and 2 feet long firmly driven in the ground would answer the same purpose.

Now a sheet of tar-paper is set on edge in a semi-circle around the hives, working it well down to, or into, the ground, so the wind can't get under; and then with two strips of lath, nail it fast to the posts. If you use boards in place of posts, it will take just about 8 feet of paper to reach around to the edges of the boards (with two 10-frame hives). The tops of the posts should be about 3 inches lower than hive-top.

Now take a handful of straw, chaff, leaves, or whatever you have to pack with, and shove it down at the back corners of the hives where the paper is inclined to touch the hive, *first*. This pushing out at the corners will draw in the back somewhere, but don't do this too much. Now mark around on a line with the tops of the posts, and with a sharp knife slit the paper from the top edge down to this line, making slits about 10 to 12 inches apart, or a little closer at the corners. Now with all the packing in, and packed tight up to to line next to the paper, and sloping to the hive top, fold in the paper so the corner flaps will overfold the others (with new, pliable paper, if you are a good hand, you can fold in without slitting, which is better). Now another sheet 3 feet long laid over these flaps will cover the top completely, and you can secure with plenty of weights, or if you use wooden covers tack to the end-pieces of the covers.

Stuff some old pieces of gunny sack between the hives in front to keep the chaff from being worked out by chickens, etc., and the job is done. It takes much less time to *do* than to *describe*.

Tar-paper is offensive to the mice, too, and I don't think they are so apt to nest inside this as in a board case, but if you use straw or chaff for packing, put it out and let the chickens scratch all the grain out before you use it around the hives, and if the hive-entrances are more than ⅜-inch, contract them with a strip of tin tacked on.

VENTILATING BLOCKS.

I tried Dr. Miller's plan of putting ⅜-inch blocks under the corners of the hives for ventilation to repress swarming. I think them a great help, but my experience was contrary to his, the bees used both sides and back as entrances, and when I removed the blocks they clustered around the back a long time before going around to the front entrance.

North Platte, Nebr.

Why are These Things So?

BY G. M. DOOLITTLE.

Why are what things so? And what is there of interest in the matter to the bee-keepers of the United States? These thoughts came to me upon laying down a paper published 23 years ago in which I read this sentence:

> "We [the bee-keepers of the United States] should do all we can to maintain decent prices for honey."

Very well, I agree to that, and as far as I know all who take and read our bee-literature of today are with me in this matter. And from what knowledge I have, there are few bee-keepers of the present who do not read the bee-literature, in comparison to what there were 23 years ago; as there has been a great drifting toward "specialty" in our pursuit during those years; and the specialist in any calling in life is the one of all the rest who keeps abreast of the times by reading up on the subject of his or her specialty.

Very well, again. And have not the bee-keepers done all they can to maintain decent prices for honey? Certainly, the specialists. Those who have read our bee-papers during those 23 years, well know that there has been no subject more thoroughly gone over than this matter of prices for our product. We have adopted attractive styles of packages, gone over all the ground looking toward the shipping of honey, so it should arrive in market in an inviting condition; established rules for grading, so that the fancy product should not be mixed in the same crate with that of an inferior quality; tried to form associations and honey companies to proclaim and boom this graded product, etc. And what has been our success in this matter? Let us analyze a little and see what advantage these things have been to us.

In this old paper in which I found the sentence quoted, I find comb honey quoted at from 12 to 16 cents a pound; and on turning to the quotations of today I find that the average of the many houses quoting honey remains at the same 12 to 16 cents. And thus it would seem that all our efforts during the past 23 years to advance the prices of honey, by getting it to market "graded to a feather," as the poultry men would say, putting it up in fancy sections, fancy shipping-cases, forming associations and companies to educate and buy the honey of those who once put the same on the market at ruinous prices, etc., have only enabled us just barely to "hold our own" as to prices, so that honey put on the market in the best possible shape conceivable in the minds of bee-keepers, brings only the same price that it did 23 years ago. Rather poor encouragement, is it not?

But what more encouragement do I want than to be able to buy my bee-papers with the same number of pounds of honey that I could 23 years ago? Then, I can buy my bee-books with the same amount of honey; and my queen-bees necessary for the improvement of stock; and—and—and—! I tried to say supplies, in which to hive my new colonies, sections in which to store my honey, cases in which to ship my honey to market, etc.; but I could not. And they tell me that the reason I cannot purchase these supplies with the same honey I could 23 years ago, and thus "maintain decent prices for honey," is because *lumber* is becoming very scarce through the denuding of the forests. Perhaps. But if you take a socialist paper you will find something said about a *tariff* on lumber, which enables the lumber trusts to cry the "denuding of forests" to their advantage. But, hold on! I have no special reason to complain of the exchange of my honey for my bee-supplies. Back a few sentences I said something about "holding our own," and quoted a poultryman's expression. Whew! that poultryman's product almost takes my breath away, as I look back over the 23 years. Eggs today 40 to 50 cents a dozen. Then, 20 to 25 cents. Why is not our honey 30 to 40 cents instead of 15 cents? Talk about holding my own! Look at butter, meat, flour—in fact, almost all a family needs for their existence (except honey), and what show has the honey-producer with these things?

Only this morning I had to pay to my neighbor agriculturist 15 cents a pound for lard, so that Mrs. Doolittle could put a crust on the pie I am supposed to have for dinner; and that brother agriculturist robbed me of nearly half of my honey that I sold for the money to buy that lard with, when a comparison is made of the prices of honey and lard 20 to 30 years ago. Then, two or three days ago I had to pay 34 cents a pound for the butter that I spread on my pancakes before I put on a lot of honey, spreading the butter thin and the honey thick, thinking in this way to equalize things a little, when I remembered that we bee-keepers used to talk in bee-conventions that the price of butter and honey was supposed to "go hand in hand," and would probably so continue down through all the time.

What *is* the trouble? Has the United States been "denuded of cows" like they have of forests, or of hen's, or of hogs? Will the socialist tell us about *tariff*, and a farmers' trust enabling them to hold the prices of butter, lard, eggs, etc., up to where it takes from two to three times the amount of my honey to buy the same amount of their product that I could get as an even exchange 20 to 30 years ago? Have I been guilty of lying when I have told my brother agriculturist and friends having large families, that bread with a little honey spread on it would be relished, and be better for the children than butter? And was I wrong when I told them that honey was cheaper than any kind of sauce, because it would keep indefinitely, so as to be just as good a week, a month, or a year after putting on the table, if all was not eaten at a single meal; while sauce that was not eaten up was poor or worthless unless eaten soon after it was made, or a can containing the preserved product opened?

But I will not enlarge further. If there is one in the bee-keeping ranks who can solve the question, why honey does not advance in price in something nearly an equal ratio with other farm products; and why it is that when farm products drop somewhat in price, honey generally takes a "slump," we should like to hear from him.

I am very anxious to hear through the columns of the American Bee Journal the "unravelling" of the mystery, and ask in the heading of this article, "*Why are these things so?*"

Borodino, N. Y.

Apiarian Exhibit at Kansas State Fair

BY J. C. FRANK.

I am sending a view of "The Golden Apiary" exhibit at the Kansas State Fair, held at Hutchinson Sept. 11 to 17, 1909. The judges were C. P. Dadant and Dr. G. Bohrer.

The premiums awarded were as follows:

Best 3-banded Italian bees and queen in observatory hive—1st, Golden Apiary, $5; 2d, W. I. Measer, $3; 3d, J. J. Measer, $2.

Best 3-banded Italian queen in mailing-cage—1st, W. I. Measer, $3; 2d, Golden Apiary, $2; 3d, J. J. Measer $1.

Best Golden Italian bees and queen in observatory hive—1st, W. I. Measer, $5: 2d, J. J. Measer, $3; 3d, Golden Apiary, $2.

Best Golden Italian queen in mailing-cage—1st, Golden Apiary, $3; 2d, J. J. Measer, $2.

Best display of bees and queen—1st, Golden Apiary, $5; 2d, J. J. Measer, $3; 3d, W. I. Measer, $2.

Best case of white comb honey, 20 sections or more—1st, J. J. Measer, $5; 2d, W. I. Measer, $3; 3d, Golden Apiary, $2.

Best case of amber comb honey, 20 sections or more, any variety—1st, Golden Apiary $5; 2d, J. J. Measer, $3; 3d, W. I. Measer, $2.

Best case of white clover honey, 20 sections or more—1st, W. I. Measer, $5; 2d, J. J. Measer, $3.

Best case of alfalfa comb honey, 20 sections or more—1st, Golden Apiary, $5; 2d, W. I. Measer, $2; 3d, J. J. Measer, $2.

Best display of comb honey—1st, Golden Apiary, $10; 2d, J. J. Measer, $8; 3d, W. I. Measer, $5.

Best special designs in comb honey—1st, J. J. Measer, $8; 2d, Golden Apiary, $5.

Best comb of white honey for extracting—1st, Golden Apiary, $3; 2d, J. J. Measer, $2; 3d, W. I. Measer, $1.

Best comb of amber honey for extracting—1st, J. J. Measer, $3; 2d, Golden Apiary, $2; 3d, W. I. Measer, $1.

Best dozen 1-pound jars of white extracted honey 1st, Golden Apiary, $3; 2d, J. J. Measer, $2; 3d, W. I. Measer, $1.

Best dozen 1-pound jars of amber extracted honey—1st, Golden Apiary, $3; 2d, J. J. Measer, $2; 3d, W. I. Measer, $1.

Best sample of sweet clover extracted honey, 1-pound jars—1st, W. I. Measer, $3; 2d, Golden Apiary, $2; 3d, J. J. Measer, $1.

Best display of extracted honey—1st, Golden Apiary, $10; 2d, J. J. Measer, $8, 3d, W. I. Measer, $5.

Best 5-pounds of yellow beeswax—1st, Golden Apiary, $5; 2d, J. J. Measer, $3; 3d, W. I. Measer, $2.

Best designs in beeswax—1st, J. J. Measer, $8; 2d, W. I. Measer, $5; 3d, Mrs. Delia Measer, $2.

Best sample of honey-vinegar, with recipe for making—1st, Golden Apiary, $3; 2d, J. J. Measer, $2; 3d, W. I. Measer, $1.

Best display of bee-keepers's supplies—1st, W. R. Randle Seed Co., $10; 2d, Golden Apiary, $8.

Best and most attractive apiary display—1st, Golden Apiary, $10; 2d, J. J. Measer, $8; 3d, W. I. Measer, $5.

For best manipulation of swarm of bees in cage by any person—1st, Golden Apiary, $10.

Best collection of honey-producing plants and flowers, mounted—1st, J. J. Measer, $5; 2d, Golden Apiary, $3.

This was said to be the best exhibit that was ever put up at the Kansas State Fair.

Dodge City, Kan.

1.---Bee-Talks for Beginners

BY JIMSON RAGWEED, OF INDIANA.

I am a bee-keeper, honey-dealer, supply-dealer, office boy, janitor, and I look after a number of other details. I have even expended some money in advertising bee-supplies, but I have resolved that if Carnegie wants to die poor just let him try advertising bee-supplies. I have just finished a good dinner, consisting of Dutch potato salad, pigs' feet, and fruit salad with whipped cream, and three candied cherries in the whipped cream, and now I feel like talking.

Beginners and Bee-Literature.

I have helped to initiate a whole lot of beginners in the mystic realm of bee-keeping, and am still at it, and what a pleasure it is to watch some of them grow and secure the very best results—and how aggravating to see others who never cease making blunders! Many of these beginners are readers of the bee-publications, and many of them never will subscribe, although a bee-paper and a text-book ought to be a part of the first outfit with any beginner, especially since our bee-publications are now gotten up so beautifully and so elegantly illustrated. Some claim that they cannot understand the terms used in the bee-papers, but I believe that with even a limited experience this would all reveal itself.

Bee-Keeping Without Veils.

One man explains that he would be fascinated with the business were it not that all the engravings which come before him in the bee-books, where one is manipulating a hive, show the operator bundled up with veil and gloves, and that he thought the business must therefore be very dangerous. In looking over my books I find this to be true, and it just spoils the engravings, too, as well as alarming the beginner. Can it be that Dr. Miller, Ernest R. Root, and W. Z. Hutchinson, don a veil every time they open up a hive? Judging from various engravings I infer that they do, and that reminds me that if I had the three of them engaged in my apiary I could not afford to pay them as much as the other boys who do not require veils. However, it would be gratifying to know that they were not smoking cigarets as soon as my back was turned, for they cannot smoke cigarets and wear a veil.

I have always advised beginners to use a veil, and I always keep a surplus for visitors, but with me the charms of bee-keeping would disappear if I had to continue the use of a veil. I do not use a veil, and I do not get stung, and I use the least possible smoke, but this cannot be learned from books—it requires actual experience, and one can become so familiar with their bees that a fighting, stinging bee can be picked up before the bee can get a foothold with its feet, which it must do before using its sting. Of course, some of the foreign races are very vicious, and a veil would be required, and one must learn, for his safety, to consider weather conditions, the time of day, and the honey-flow. I do remember an early experience where a foreign bee that had not yet become Amercanized, stung me inside the nostril, and it hurt so badly that I felt that to take my pen-knife and cut my nose off would be a relief.

Robber-Bees in the Apiary.

I am frequently asked how to stop robbing, and it is about the most difficult question that is ever presented, for, after robbing is started, it is very difficult to stop it, and it should be impressed on all that prevention is the best remedy. In visiting good, progressive bee-men I have been greatly surprised how much robbing was tolerated. Many have the habit of placing any waste honey in the open air to be taken by the bees as a matter of economy, not realizing that this will demoralize a lot of bees, for it seems to me that "once a robber always a robber," and the robbers have a way of reporting any "find" to their comrades.

I have observed some peculiar incidents in connection with robbers. Once I overlooked a brood-comb containing some honey which I left at the base of an apple-tree. On returning to the yard I found that the bees had carried away the honey, and a throng of bees were hovering about the base of all trees in the orchard. I wondered if the first scout, on returning with its morsel, had not told one of the sentinels, in the bee-language, that the loot was to be found at the base of one of the trees.

On another occasion I left a dish of honey in a south window of my honey-house, and in a little while there was a throng of bees at each south window of my house, and the same thing prevailed at my neighbor's, a block away. Evidently the discoverer had stopped and shouted at the top of his voice, "Come on, kids! right out here at a south window!"

If I should spill a few drops of honey or sryup on a hive cover I would immediately wipe it away with a wet towel, rather than have my bees take it up and then become demoralized: and I am very sure this would be good economy.

Chunk Honey Increasing.

Because bees are so very interesting we find a great many men keeping a few colonies just for the pleasure of studying their wonderful ways. If details were carefully studied the profits could be greatly increased in many instances. For instance, if one is not required to case his honey for shipment to another market, the product can be increased by omitting the separators, for anything that divides the cluster will surely retard comb-building. A larger section would also aid in securing a larger yield; but it is well to keep in line with standard goods. I find that many bee-keepers are shipping their honey to a distant market when it could have been sold at home for even better prices.

One most excellent way of getting returns is to produce comb honey in shallow extracting frames, and then cutting it out and place it in pails of say 3 pounds of comb and 2 of extracted. This is called "chunk honey," and the demand is constantly increasing. It relieves the burden of carrying over a lot of unfinished sections from one season to the other, and more honey can be secured because the working force is not divided with sections and separators.

VARIABLE BEE-KEEPERS—FALL FEEDING.

Some bee-keepers get very enthusiastic over their bees during the honey-flow and then neglect them during fall and winter. A colony of bees could yield a hundred pounds of surplus and starve with an empty brood-chamber during winter. If you permit this to happen, the humane society ought to get after you. Fall feeding is always more satisfactory than spring feeding, and there is no danger of overfeeding in the fall, for if an abundance is provided they will begin in the supers that much earlier the next season.

SIZE OF HIVE PREFERRED.

Some of us are undoubtedly prejudiced in our methods of doing things. If you prefer a 10-frame hive to the 8-frame size, by all means adopt the one that you prefer. With me I find that my bees build *up* more readily than they *widen out*, and for this reason I prefer the 8-frame hive tiered up according to the strength of the colony. In wintering I think I get best results in the smaller brood-chamber, for I would prefer a specified amount of honey stored in 8 combs rather than have the same amount distributed in 10. In regard to these disputed points it is always well to say that difference in locality may require different methods.

(To be continued.)

Reflections of a California Bee-Keeper

By W. A. PRYAL, Alden Station, Oakland, Calif.

And Alfalfa Bows to the Bees

Some years back a few alfalfa growers raised quite a how-de-do because bees extracted nectar from their alfalfa blossoms, and, forsooth, the crop, especially of seed, was ruined. Of course, bee-keepers never believed that such could be the case; in fact, they just knew the contrary was true. We all remember the case of the Australian farmers who were only too glad to have bees brought near their clover-fields that the seed-vessels would be fertilized by these insects.

From "Kimball's Dairy Farmer," Oct. 15, I learn that Prof. Coburn, in his admirable work, "The Book of Alfalfa," pays a very high compliment to the honey-bee in the necessary work it does for the seed of this plant. He says:

> "It has been discovered that the honey-bee is of more importance to the alfalfa than the alfalfa is to the bee."......"The peculiar construction of the alfalfa blossom renders it unable to fertilize itself, and its shape makes cross-fertilization very difficult. In the marvelous 'balance of good' in nature, alfalfa, like thousands of other plants, is aided in its lease of life by the insect world, It is not known just how many insects or birds assist this remarkable plant, but the honey-bee is the most conspicuous, the most industrious, the most eager, and certainly the most useful"

Then the author cites several experiments that were carried to a successful conclusion to prove that without the bee there would be no alfalfa seed.

Good! Plant more alfalfa, ye farmers and stockmen, and invite a few of the nicest people in the world to come with their honey-bees and be your neighbors.

True "Wonderberry," or the Himalaya Blackberry

A good many persons who have made the acquaintance of the Himalaya blackberry look upon it as an Asiatic fruit; others claim it as purely of California parentage. Just what it is I am at a loss to say, as it is one of Luther Burbank's "creations," whatever that may mean. It was only a few months ago that our noted plant breeder, in a remarkable letter he sent the Rural New-Yorker, stated that this fruit was one of the many notable creations he sent out. Whether that means that he produced it from seed of his own hybridizing, or if it is one of his "pick-ups," like the Australian Crimson Rhubarb, Spineless Cactus, and, I am led to believe others, including the so-called Wonderberry, or *Slolanium nigrum burbankii*, as it might, through courtesy, be called, I cannot say. At any rate, I should judge it has some claim to at least a partial birthplace in the Himalayan Mountains. And all this uncertainty as to its real nationality impels me to christen it the "Wonderberry." And 'tis a wonder in other ways, besides. It may not be the best of our "wizard's" plant-productions; it is certainly no mean one, and I am giving him the benefit of the doubt as to his being its putative father, to put it that way.

To the bees it must be a wonderberry, for, as far as I know (and I am acquainted with about all the blackberries under cultivation in this part of the world) it is the only black-fruited berry that blooms through a good portion of the late fall, and sometimes in a limited way, even into December. It makes good bee-pasturage; the pity is that there are not more of them grown. It begins to ripen its fruit, which is borne in prodigious quantities, just about the time raspberries and common blackberries are going out of season, and it so continues to ripen an abundance of luscious fruit for over a month, and slacks off gradually for several weeks more, and sometimes it runs on even into winter.

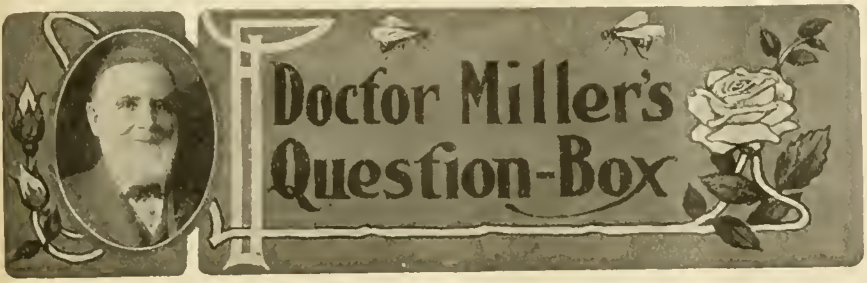
HIMALAYA BLACKBERRY BLOSSOMS.

The vines are rampant growers, and often push their luxuriant growth 20 feet all about them. They should be grown on trellises; usually the wood lives on for a number of years, being in this regard unlike other blackberries. As a preserving fruit for jams and jellies it is par excellence. I don't know if it will succeed in the East. It is worth trying for its fruit and the bee-forage it furnishes.

Eucalyptus for Quick-Get-Richers

I notice that a lot of the papers and magazines are publishing the advertisements of promoters of eucalyptus hardwood schemes, most of which claim that thousands of acres of this valuable tree are being planted in this State; that by buying stock in these schemes one cannot help but get rich.

The eucalyptus is all right; so is the planting of it, but I would caution any one having anything to do with these schemes. Better get some land and raise your own trees; you will then surely know "where you are at." Gold bricks and eucalyptus stock are good things to let alone, even if some of them seem genuine.



Send Questions either to the office of the American Bee Journal or to
DR. C. C. MILLER, Marengo, Ill.
Dr. Miller does *not* answer Questions by mail.

Wintering in Outside House — Hive-Ventilation—Wintering Queenless Colonies.

1. Is it a good idea to put bees in an out-house for wintering? Will it be better than leaving them on the summer stands?

2. Is it a good idea to ventilate the hive near the top by boring a small hole to let the damp air out?

3. Will a colony of bees that loses its queen in October or November live through the winter? and can they be kept until May, or until the shipping season begins?

ILLINOIS.

ANSWERS.—1. It will be all right if they are well packed and warmer on top than on the sides, only you must be sure that there is a clear entrance for them to fly whenever a day is warm enough.

2. Some favor and some oppose the idea. The important thing is to have warm packing *on top*.

3. They are not so likely to live over, but sometimes they do. It will probably be more profitable to unite them with a colony having a laying queen, even if you divide again in the spring.

Getting Increase of Colonies.

I am a beginner and have fifteen colonies. I would like to increase. I divided one colony the past fall. In August I took 3 frames out of one colony, bees and brood together. I did not look for the queen. I did not know if I had the queen in the old or new hive, but they are both all right at the present time. Would you advise dividing that way in May or June, or not at all in that way? If not, kindly explain how is best.

PENN.

ANSWER. — Your plan of dividing could hardly be easier, but it might be better. If you take the 3 frames of brood and bees and put them on a new stand, all the older ones will return to the old stand, leaving a rather discouraged lot of bees not in condition to rear the best kind of a queen. Better make sure which is the queenless part and leave it on the old stand. Then a week later you can let the two hives swap places, if you like. You will see that by having on the old stand the part that is rearing a queen, at least for the first week, there will be a stronger force, especially of the older bees, and you will have a much better chance of a good queen.

Keeping Bees Warm in Winter.

I thought that all bee-keepers who wrote about bees advised keeping them warm in winter, so that they would not "burn" so much honey to keep up heat, but when I read, in "Forty Years Among the Bees," page 304, about your warm cellars and plenty of fresh air, I thought it would not take so much honey as it would in a cellar without the furnace. But when I turned to page 324 and saw what you wrote later on, you say that the bees in the warmer part of the cellar starved to death. How can you tell in what temperature bees will use the least stores in winter?

A neighbor of mine says that to have plenty of cold air by having cracks in the sides of the hives and setting them on boards with the hives apart so the bees will keep too cold to eat much honey, is the best to winter them. He left a colony up in an apple-tree where he hived them, and said that they did fine until a snow-storm came and blew the hive down. Another neighbor claims that in hiving swarms that get contrary and will not stay in the hive, to tie a red wasp in the head of the hive they will stay all right. This is supposed to be put in, in case the queen gets lost or killed. Another one claims his mother had a swarm and the "king" got killed, and she made a "king" out of flannel and tied it up in the hive, and they did all right.

TAR-HEEL.

ANSWER.—About 45 degrees above zero is considered the temperature at which bees are most nearly dormant, and at which they will consume least stores. If colder they must consume more to keep up the heat, and if warmer they are more active and use up more stores.

Your neighbors seem quite original in some of their views. You do not mention the color of the "flannel king." The wrong color might be fatal!

Breeding to Improve Bees.

Please read the enclosed clipping on trap-nested stock as layers, and give your idea of it as to whether it could be carried out in bee-keeping. I think the same system ought to be. Then we would get some good *stock*.

NEW YORK.

In the long and interesting clipping you have sent, the part to which I think you refer reads as follows:

"We believe it is an error to breed from the 'abnormal' hen. By 'abnormal' I mean a hen whose laying record is too far removed from the average ('normal') of the flock of which she is a member. For instance, when our flock average for last year was 162 eggs per hen, we considered all hens varying more than ten per cent from the record 'abnormal.' This applied to those laying above as well as those laying below the average, and we considered hens laying uniform eggs between the numbers 170 and 180, the best breeders in the flock. These we housed by themselves to use in further developing the strain.

"In this selection great care was taken to pick out only such breeders as showed strong vitality. It is the heavy layer of weakened constitution that will nullify all previous good work accomplished with the strain, since she cannot transmit to her offspring the first essential to a successful career as an egg layer, viz., a healthy, robust body.

"It seems to me the way to improve a strain of egg layers is not to take the star performers who have (judged by the average performance of the flock) overstrained themselves, but rather to take those that have done a little better (not exceeding ten per cent) than the rest. If a whole flock can average 162, the all-round best birds, for that flock, are slightly above the average."

I am not a scientific breeder of either bees or biddies, and so not competent to pass opinion as to whether there is much in this for bee-keepers or not. Some time ago the Bee Keepers' Review contained several articles on the same line written by a man well qualified as a breeder of fine horses. They appeared to be ably written, going into details which, if carried out, might produce results, but it seemed to me that it would be somewhat difficult for us everyday bee-keepers to understand and carry out the instructions given. If any-one has tried to put them in practice, I do not remember to have seen any account of it.

According to the teaching of the clipping here quoted, the matter is much simpler: It is merely to select for breeders those which give not more than ten per cent better results than the average. For instance, if your average per colony this year was 60 pounds per colony, and you had one or more colonies yielding 100 pounds each, and one or more yielding 66 pounds each, you are to breed next year from those which gave 66 pounds each. The idea is that the 100-pounders are freaks, inconstant in habit, and so are likely to hark back to poorer work, while the 66-pounders are more likely to be permanent in their posterity.

If I may be allowed to venture an opinion, the idea that a hen which has overstrained herself by too heavy laying has weakened herself thereby and will consequently have a weakened posterity hardly applies to bees. But, of course, I don't know for certain.

I suppose it is undisputed that in many cases where a new strain has been established in some class of domestic stock, the starting point has been with some animal which showed a marked departure from the ordinary type—a sport or freak—and then the effort was made by selection to make permanent that freakish departure.

I must confess that for years I have been breeding from freaks. In other words, I have bred from queens whose worker progeny gave me the largest yields. The result has been exceedingly satisfactory, so far as yield is concerned. Whether I might not have done as well or better by persistently breeding each year from stock whose yield was only ten per cent above the average, I cannot say.

I am confident of this, that if a bee-keeper breed each year from stock better than the average, he will be sure to improve his stock, whether he follows the plan of breeding from stock 10 per cent above the average or from that which is 100 per cent better.

Requeening Colonies.

I have 170 colonies of bees, 70 of them with Italian queens that I bought of reliable queen-breeders. The balance (100) are composed of common bees, partly Italian and mixed with black bees. Now, I do not feel able to buy queens for the 100 colonies, and ask for the best way to requeen them, and wish you to be particular to give me a method that a common bee-keeper ought to be able to understand and use. I do not care to try cell-cups or any method that is adapted to experts. I wish to requeen the 100 colonies from cells reared from eggs of some of the best queens I now have.

"SOUTHWEST."

ANSWER.—I can do no better than to repeat my reply to "Tennessee" in another column. The second plan given is the way I rear queens for my own use, and by using brood each time from the best stock I have developed bees that are truly hustlers. You can do the same. Only don't make the mistake I did, and regard only gathering qualities. Look out for temper at the same time.

Transferring Bees—Getting Extra Brood - Combs — Introducing Queens—Best Honey Strains of Bees.

1. I have one colony of bees with crooked combs which I am unable to get out of the hive. Would you transfer them early in the spring, or wait until they swarm?

2. How do you like putting a hive with one frame of brood over the colony to be transferred, and a queen-excluder between, when you catch the queen in the upper hive?

3. What is the best way to get extra brood-comb for late swarms? They do not draw out foundation well. I use shallow frames in the supers.

4. Would like to rear a few queens, but think the Pratt method too complicated for a beginner. Can you tell me a simple way to rear them?

5. Can you give me a safe way to introduce a breeding-queen? I was not very successful

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with the candy method last summer. My bees are hybrids.

6. What do you think of feeding sugar in the spring?

7. Do you think some strains of bees will gather much more honey than others, under the same condition? What strains do you recommend?

TENNESSEE.

ANSWERS.—1. Wait till they swarm; hive the swarm, setting the old colony and swarm close together, and 21 days later cut up the old hive, melt the combs, and add the bees to the swarm. If, however, you want increase, you can transfer at the end of the 21 days.

2. It will work all right. Here is something you may like better: Drum out all the bees, putting them in the new hive on the old stand with a frame of brood, put on an excluder, and then the old hive. In 21 days the worker-brood will be gone from the old hive above.

3. You can get combs built out only by having them filled, as bees do not build comb beyond their needs. Instead of shallow frames, you can put a story of deeper frames above, and then extract them. Or, you may brush bees and queen from the combs into the hive, leaving one brood in the hive and filling up with foundation, then put the frames of brood in an upper story, and excluder between. Then, when the brood has matured above, you may take these upper combs, extracting from them if necessary.

4. When the harvest begins, take from your best colony two frames of brood with queen and adhering bees, and put them in a hive on a new stand. Ten days later let the hives exchange places. Then divide the queenless part into nuclei of 2 frames each, making sure that each nucleus has a good cell centrally located, and imprisoning each nucleus for 2 or 3 days. The one on the stand where the queen had been needs no imprisonment.

Another way: Get a fresh comb built in the colony containing your best queen. About ten days after this comb is started, take it away and put it in the center of a strong colony from which you have removed the queen. Nearly all the cells the bees start will be on this comb, because it is freshly built. These cells may then be distributed to nuclei at pleasure.

You will find some valuable information about this simple way in "Forty Years Among the Bees."

5. Yes. I can give you a way that is entirely safe. You must have some frames of brood just hatching, with no unsealed brood. One way to secure these is to put the frames of brood over an excluder on a strong colony 8 or 9 days before you want to use them. Brush all the bees off these combs, leaving not a single bee. Put them in a hive that you will set over a strong colony, with a sheet of wirecloth between the two stories, and close up *bee-tight*, of course after putting in the queen. In five days you may allow a very small entrance somewhere into this upper story, but of course not connecting with the lower story. As soon as you think enough bees have hatched out to keep the bees from chilling, remove to a new stand. Possibly there may be enough bees at the end of the 5 days, in which case it will be better to remove to the new stand before allowing any bees to fly.

6. Not so good in spring as in fall, but will do if you have no honey. But some pollen must be present, for bees cannot rear brood from sugar alone.

7. Yes, there is a difference. Italian 3-banders are probably as safe as any.

Oil-Heater in Bee-Cellar — Medium Brood in Shallow Extracting Frames—Feeding Combs of Honey.

1. Will an oil-heater burning in the cellar for a few minutes affect in any way the bees that are stored in it?

2. Will medium-brood comb foundation be all right for shallow extracting frames? and will it do to put full sheets of foundation between drawn combs in supers?

3. In giving combs of honey in early spring to a colony, do you put them in the center of the brood-nest? Do you scratch or break the cappings?

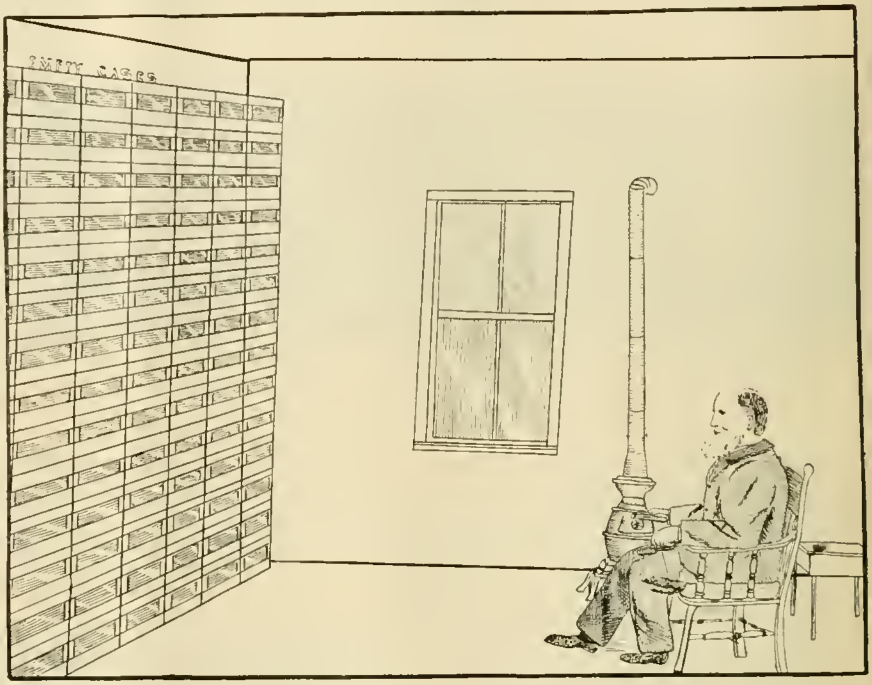
It is wonderful what a fund of information we have in the American Bee Journal. It saves us a lot of mistakes and blunders.

IOWA.

ANSWERS.—1. Yes, it will warm them up and it will injure the quality of the air. Hot stones or jugs of hot water tightly corked will leave the air better.

"DOT HAPPY BEE-MAN."

(Drawing sent specially for the American Bee Journal by Leon C. Wheeler, of Barryton, Mich.)



DR. MILLER—How lucky! There's a railroad car famine, and if I had any honey to ship I'd likely have trouble to get a car. Fortunately, I've no honey to sell, so I won't have to bother. How happy I am!

O I ish von of dose happy bee-mans,
I don't got to vork any more;
I loafs all day on der shtove round about,
Und hops mit mine feet on der floor.

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2. The medium brood will be all right. It will give better combs to keep the foundation by itself, as there is likely to be some irregular work if combs and foundation are mixed.

3. Put them next to the combs containing brood, but not between them. It is not a bad plan to break the cappings.

Bee-Moth in Winter.

I have a good colony of Italian bees that did well the past summer. When removing the quilt on top in preparing them for winter I found a bee-moth between the quilt and frame.

1. Will the bee-moth work this winter?

2. Will the bee-moth (or grub worm) when matured, die, or will it build a cocoon and then hatch? If so, into what?

3. How and when is the best time to get rid of it?

MAINE.

ANSWERS.—1. The moth is likely to die before spring without laying any eggs; but there are very commonly eggs or young larvæ that will live over in the hive.

2. The grub, or larva, when it comes to full size, spins a cocoon and comes out a moth, and in course of time the moth dies.

3. The best thing is to keep colonies strong so the bees will keep the moth at bay, although Italians will defend themselves even if tolerably weak.

Moving Bees to More Pasturage.

The honey source here is white clover and basswood. Ten miles west from here is 40 to 60 acres of wild raspberry bushes, fairly well covered. People came 10 to 14 miles to pick berries from this patch last summer. It was just covered with berries. In a town 14 miles east of here they started a cucumber pickle factory last summer. The farmers around there raise from ¼ to 1½ or 2 acres each of cucumbers.

1. Would it pay to move my bees 10 miles west to a 40 or 60 acre patch of raspberry bushes next summer, back here for the basswood flow, and 14 miles east to the cucumber fields after the basswood flow, as there is "nothing doing" here after the basswood flow?

2. How many colonies could I move to this raspberry field to best advantage? I have heard that raspberry bloom almost always will yield nectar.

3. How is cucumber as a nectar-yielding plant? and how many colonies could be kept at one place to the best advantage, when the farmers raise ¼ to 2 acres each?

MINNESOTA.

ANSWERS.—1. I can only guess, and my guess is that it would pay to do so if nothing is yielding at home at the time of raspberry and cucumber flow.

2. If no other bees are there, 100 colonies or more might do well.

3. Hard to tell. Depends somewhat upon size of farms. If each farmer plants half an acre, you will readily see that there will be four times as much pasturage if the farms average 40 acres as if they average 160 acres. I should guess that 100 colonies might do well with 1 acre in every 100 in cucumbers.

Spacing Hoffman Frames—Queen Returning from Mating—Space Above Brood-Frames.

1. Are shallow extracting frames (Hoffman) spaced right for brood-frames?

2. Will new swarms, put on these shallow frames with full sheets of thin super foundation, wired and waxed to top-bar, hold in place and not melt down?

3. Will a virgin queen taken in a trap when she comes out to mate, if the queen and trap are carried off a few rods, opened, and the queen takes her flight, be sure to come back in safety?

4. How much space do you want between super and brood-frames?

5. Do your bees build comb and fill in badly between the top of the brood-frames and the bottom of the sections first put on?

6. Is there any practical way to prevent this nuisance, and have them do good work?

MASSACHUSETTS.

ANSWER.—1. I think they are generally made to space 1⅜ inches, which is all right for brood-frames. Of course they might be made differently.

2. I don't know. If the hive has no chance for ventilation except the ordinary entrance, I should expect a break-down, especially if the weather is very hot. With abundance of ventilation below *and on top* it might be all right. But with the slack horizontal wiring that is sometimes advised I should expect so much stretching at the upper part as to make the comb unfit for brood-rearing.

3. I think so. Of course I suppose you mean to take bees in the trap with the queen.

4. ¼ inch.

5. No; but more than I like.

6. Years ago I had ⅜-inch space between top-bars and super, and there was a bad mess in the space. I then used Heddon slat honey-boards. That left the mess as bad as ever between top-bars and honey-board, but almost entirely clean between honey-board and sections. With ¼-inch space between top-bars and super there is so little building that I prefer not to use the honey-board. Possibly the size of the top-bars (1⅛x⅞) has something to do with it.

Italianizing—Rearing Queens.

1. A friend bee-keeper told me that if I had a colony of Italian bees and black bees, and wanted to get pure stock of Italians from that colony, I could get them by boring a two-inch hole in a block of wood and cage a young queen, or, in other words, a ripe queen-cell and a fine drone of her kind for 7 days, and the queen would be mated with that drone. Is that so?

2. What are the best bees for me in Rappahannock Co., Va.?

3. Do you think I can rear my queens all right now if I can get them mated the way I want?

I have black bees and Italians.

VIRGINIA.

ANSWERS.—1. There might be one chance in a million for success if it were not that the drone would be likely to die before the end of 7 days.

2. Probably Italians as nearly pure as you can keep them.

3. You can rear the queens all right; but will probably never control the mating.

Rheumatism and Bee-Stings.

I would like a little space in the American Bee Journal to probe the truth of bee-stings being good for rheumatism. Last year I suffered very much with rheumatism. I took every precaution and fixed so they could not sting me. This year I did not have time to fix for them, and they stung me whenever they wanted too. In fact, they made me very sick at my stomach. The trouble all seemed to settle there, and that was the last of my rheumatism. Before, at this time of year, I could hardly get my clothes on for pain. The bee-stings drove the trouble into my stomach, and when my stomach trouble left me I was well of rheumatism, and have been ever since. Now what did it? I took no medicine. This is a true statement. It was the last time I worked with them this year, that they stung me so badly and made my stomach hurt.

TENNESSEE.

ANSWER.—No doubt some would credit the cure to the stings, while others would deny that the stings had any effect. The trouble is to tell whether a cure comes on account of the stings or merely after the stings. So many cases have been reported where the stings were believed to have effected a cure that one can hardly blame people for having faith in them.

Sweet Clover and Alfalfa.

1. I have about 2 acres of pasture I have thought I would sow in sweet clover, and possibly the cow would eat some and the bees some, and it would fertilize the ground some; and in the fall it would die and there would be about as much blue-grass as if the sweet clover had not been there. I saw not long ago an advertisement where some fellow had yellow sweet clover seed for sale. Which is the better, yellow or white?

2. Can I sow it on the sod and get a crop next year? and when is the best time of year to sow?

3. If I were to get a stand of sweet clover and then sow alfalfa in among it without breaking up the ground, would the alfalfa catch? It is said that the sweet clover impregnates the ground with the proper bacteria. What do you think of the alfalfa idea?

ILLINOIS.

ANSWERS.—1. It depends upon circumstances which is better for you. One kind yields probably as much nectar as the other, but the yellow is 2 to 4 weeks earlier than the white. If you have a good yield of white, or Dutch, clover, the white variety of sweet clover is better, as it follows the white clover. In a failure of white clover, yellow sweet may be better than white sweet.

2. You are not likely to get a good catch by sowing sweet clover on sod; but you may succeed if you sow in early spring and let stock tramp it in the ground while the ground is wet and muddy.

3. The same thing may be said about a catch of alfalfa as is said in the previous reply about sweet clover. Good idea to get in alfalfa for cattle and horses, but the likelihood is that in your locality it will be worthless for bees.

Dog-Bane or Bitter-Root.

Has the weed commonly known as dog-bane, bitter-root, or honey-bloom (technical name is Apocynum androsæmifolium) any special value as a honey-plant? NEW YORK.

ANSWER.—I don't know, but the fact that it has not been reported as a good honey-plant makes it a pretty safe guess that either it is not a very good yielder, or else it is not found in sufficient quantity to be worth considering.

Making T-Supers.

I would like to have a T-super. I have made some hives, but don't understand how a T-super is made. Will you kindly describe it?

BRITISH COLUMBIA.

ANSWER.—The T-super is a plain box without top or bottom. It should be the same width as the hive on which it is to be used, ¼ inch deeper than the sections to be used in it, and ¼ inch longer, inside measure, than the length of the 4 sections. Thus a super for an 8-frame hive, to contain 24 sections of the size 4¼x4¼x1⅞, will measure, inside, 17¼x12⅛x4½ inches. To support the sections at each end, a strip of tin is nailed on, that projects ¼ inch inwardly, and 3 T-tins, each 12 inches long (which can be bought of supply dealers), will be supported by 3 squares of sheet-iron nailed on the bottom at each side, or else by staples driven in and bent over.

Producing Honey Without Separators.

I saw an article in the November issue about producing comb honey without separators, and I don't understand the method. I would like to have you explain it.

KANSAS.

ANSWER.—I can hardly see what there is to explain. According to Mr. Morrison the single requisite for getting straight sections without separators is to have the sections narrow enough. He says they must be 1¼ inches in width, and you will see that in the same article Mr. Hutchinson thinks 1½ is narrow enough. Except that one matter of width, there is nothing special about the sections. If you want to try the experiment, all you have to do is to order sections of any size you desire, only so the width is 1¼ inches, unless you want to try Editor Hutchinson's 1½ inches. Whether any change must be made in your supers depends upon the kind of supers you have. A T-super will need no change, but if you use any kind of frames of bottom supports for the sections, then these must be of the right width.

Spiders and Bees—Chaff Cushions—Feed for Spring—Getting Bees Down Into Brood-Nest—Queen Candy.

1. Do spiders ever injure bees?

2. Is not the purpose of the chaff cushion partially defeated by placing a super-cover, or enameled cloth, over the brood-frames, and under the cushion? I see this plan advocated in Gleanings.

3. Which would be best to feed bees in the spring to encourage brood-rearing, syrup from granulated sugar, or candy made from honey and powdered sugar?

4. How can I best get a colony of bees down into the brood-nest in very cold weather? They are clustering on the empty extracting frames which I neglected to take off before this, although there is plenty of honey below. (Dec. 20, 1909.)

5. How do you make queen candy?

ILLINOIS.

ANSWERS.—1. Not to any great extent. If their webs are allowed at the entrance of a hive, a few bees will be caught and killed.

2. No; the object is to keep the hive warm, and especially to have the top of the hive warmer than the sides; and the cushion will help to confine the heat whether over or under the cover.

3. Probably the candy, just because it has some honey in it.

4. It seems almost impossible that the bees should have clustered on the extracting-frames unless there was considerable honey in them. On a day when it is warm enough for the bees to fly, shake and brush them from the extracting-combs down upon the brood-combs. If you are afraid the bees will starve before a flight-day comes, take them into a warm room late in the day, and operate at night with very little light. But it is quite possible that when a warm day comes the bees will shift their location of their own accord.

5. Take a small amount of extracted honey warmed and work into it enough powdered sugar to make a stiff dough. Let stand a day or longer, and if it becomes thin work in more sugar.

Transferring Bees—German Bee-Paper—Preventing Swarming.

I am only a starter in the bee-line, and have to learn a lot to be successful. I started with 3 colonies 2 years ago, and did fairly well. A few months ago I bought 11 colonies, which are housed in ordinary boxes, turned upside down, and I expect to have a hard job to transfer them next spring, as the bees have built the combs solid in the box, and there is no way of getting at them.

1. My idea is to set an 8-frame Langstroth hive on top of the hive next spring, and after making some opening on top of the old hive, drive up into the new hive with smoke. Of course I intend to give each about 3 complete frames, and the rest foundation. Do you approve of this plan? Maybe it would be better to set the old hive with the bees on top and drive them down into the new hive.

In the American Bee Journal I often see the Pratischer Wegweiser mentioned. Being a German, it would be good for me to have it. Kindly tell me how to get it.

3. I would also like to get a little handbook of preventing the swarming of bees that is practical, and does not cost too much.

NEW YORK.

ANSWERS.—1. Either plan will be all right if the bees will move, but you may find them very stubborn about it. They will travel up more readily than down, and pounding on the hive will help no little to make them go up. Instead of making an opening in the top of the hive it may be a good deal better to turn the hive upside down. That is on the supposition that the bottom is not nailed to the hive, and, even if it is, the bottom can be knocked off.

2. Praktischer Wegweiser fuer Bienenzuechter is published in Oranienburg. Berlin, and costs 75 cents a year.

3. I do not know of a handbook on that subject. The nearest that comes to it is probably "Forty Years Among the Bees," which can be had for $1.00, postpaid, at the office of the American Bee Journal.

Hives—Drawn-Combs for Swarms—Best Strain of Bees—Best Super Chaff Hives.

1. I use 10 frame Woodman Protection hives with Langstroth frames. Would it not be a good plan to extract the honey mostly in the spring at the beginning of the honey-flow and give the queen more room to hatch, as last year my hives were full of honey in the fall and the bees died off heavily in the fall, and did not consume much honey through the winter, although they swarmed quite early, but little swarms? I think this is because the queen did not have much room to hatch. What do you think?

2. In hiving a swarm don't you think it a good plan to supply the new swarm with drawn combs, 3 or 4 of them or more, as it would give the queen room to lay at once, and they would breed up faster?

3. Which is the best super for comb honey, and gives the best results, and the most convenient to use? Would not one extracting-

frame on each side of the sections be a good arrangement to use for best results?

5. I have 10 colonies in chaff-hives, and 11 in single-walled hives. The 11 are packed on three sides. The temperature stands at 30 degrees about all the time. I can not make it any warmer this year. I give them ⅜x5 inch entrance, and 4 of them a 7-inch entrance. They are very heavy colonies. Would you advise a larger entrance or not? The cellar is very dry and is ventilated well, and the bees seem quite quiet. I have a chaff tray on all.

6. Would it pay to use all chaff-hives even if one does winter his bees in a cellar, as they afford better protection in the fall and spring, and bees will breed up faster? I want to start in with the best that can be had.

MICHIGAN.

ANSWERS.—1. It is a good plan to extract some of the honey from the brood-combs *if in all hives* you find the queen has not room enough to lay in spring or early summer. But that's a thing that rarely happens, and I very much doubt whether that was the trouble with your bees last year. Very early the queen requires not a great deal of room, because there are not enough bees to cover a large amount of brood. As the season advances the honey is used up very rapidly, giving the queen constantly more room. At any time you think there is danger that the queen is crowded for room, look and see whether there are no empty cells in the hive. If all the cells are filled either with brood or stores, then there is a possibility that the queen may be crowded for room; but not till then. Even if you should find a colony with its queen crowded for room, instead of extracting any honey, it may pay better to take out a frame filled with honey and exchange it for an empty comb in some other needy colony.

2. Yes, giving ready-built combs will save the bees just so much labor and material.

3. Generally, leather-colored Italians are preferred for work. Hybrids, as the cross between blacks and Italians is called, are among the worst to sting.

4. If rightly used, I know of nothing more convenient than the T-super. As to amount of honey stored, probably one kind of super will give as much as another. Some have reported good success by having extracting combs and sections in the same super. But a T-super would hardly answer for that purpose. Wide frames would be better.

5. It will probably be better if you give in the cellar the full-sized entrance, and keep the cellar as nearly as you can at 45 degrees. Even at 30 degrees, better enlarge the hive-entrance.

6. I do not know of any one who has tried it extensively who thinks it pays to have chaff-hives for wintering bees in the cellar.

Reports and Experiences

Honey-Remedy for Ear-Ache.

A recipe for ear-ache remedy: One drop of honey to a little warm water, well mixed; one to two drops in the ear. Sure thing.

Bees did very little here last year.

Virginia, Ill., Dec. 20. F. M. DAVIS.

Only One-Third of a Crop.

Bees did not do well this year. I got only about one-third of a crop, but am living in hopes of a better one in the coming new year of 1910. H. A. RUSHTON.

Jackson, Mich., Dec. 27.

Laws Against Spraying in Bloom.

Allow me to ask if the American Bee Journal can furnish a brief account of the law in the different States against spraying while in bloom. Having suffered heavy loss myself, and finding many others have been greatly damaged, in many cases not knowing the cause, I want authentic information for use in a practical way.

I do a good deal of work within a radius of 50 miles, among people who wish expert advice and assistance, and this brings me in touch with people of influence who could, and would, help us to control this great damage. Also, I speak more or less to granges and farmers' clubs, and a little good-tempered advice and information on the spraying evil would count for much. The farmer is an intelligent, practical man, as a rule, and if I can show him just what other States find it wise to do, he will be more impressed than by anything I can say. It is a fact that localities in this section were so thoroughly poisoned that squashes failed to set, and there is no doubt that the apple crop itself was greatly injured. But preparation is being made for much more extensive spraying in bloom next year, the effort being to destroy the codling-moth larvæ (carpocapsa pomonella).

GEORGE W. ADAMS.

Rt. 1, Rowley, Mass., Dec. 24.

[We are going to ask any of our readers who can do so, to mail Mr. Adams copies of any laws that may be on their statute books, on this subject. We hope they will be prompt in doing this, so that Mr. A. can have the desired information in time to make good use of it.—EDITOR.]

Complete Failure of Honey.

I have 8 colonies of bees in the cellar, apparently doing well. Last year was a complete failure for honey here; bees got little more than enough to winter on. But we hope for better results next year.

ARTHUR FITZPATRICK.

Flandreau, S. Dak., Dec. 27.

Very Poor Season for Bees.

The last season was a very poor one for the bees; about one-third of a honey crop from clover. Bees went into winter fairly well supplied with stores from smartweed, and we hope next season will be better.

J. F. VIGOR, M.D.

Pomona, Kans., Dec. 20.

Good Prospect for White Clover.

My bees are prepared for winter on the summer stands.

The past one was another poor honey season in this locality, and that was the third poor season in succession. We produce mostly extracted honey, but we try to produce some section honey, and did not get a single section in the last 3 years. We got only about 300 pounds of extracted honey last season from 70 colonies. Some of the colonies needed feeding to bring them through the winter. As I have been in the business nearly 40 years, I will not give it up yet. There is a good prospect for white clover for the coming year, so I still live in hopes that we may have a bountiful crop next season. MAX ZAHNER.

Lenexa, Kans., Dec. 1.

Bee-Stings and Rheumatism.

I often see articles in the American Bee Journal and in "Der Geflegelzuechter," on bee-stings as a cure for rheumatism, and I consider it my duty to tell my experience.

Early last spring I began to feel pain in my left arm between the elbow and the shoulder, and started to rub it with different salves and liniments. When I did not get relief I went to a doctor, who said it was muscular rheumatism, and that I should take some medicine. Things went on for more than a month, and the pain grew worse. In the morning I could hardly dress myself, and a friend told me that Turkish baths would fix me up. I took two, and in the meantime rubbed my arm till the skin was sore, but the pain remained. Then I gave my bees a chance, although I did not think much of it at first. But I thought it would do no harm.

I collected about a dozen bees in a glass, and set them on the spot where I had the pain. By shaking the glass and knocking at it I got the bees angry so they would sting, and I repeated it three or four times, at intervals of about a week. I felt relief the next day after the first trial, and the pain disappeared inside of a few weeks, and I have had no pain since. I want to say that my arm did not swell at all at the spot where the bees stung, but it swelled very much near the wrist.

As to any "shock" received when the bees stung, I cannot agree with Dr. Bonney (see November, 1909, issue). When a bee sat on my arm I expected a sting, and took it as a matter of course that it would hurt a bit.

Someone may say it was not rheumatism that was bothering me, and I can't swear it was, but I know since the bee stung me I am rid of the pain in my left arm.

Brooklyn, N. Y., Dec. 25. A. WENZ.

Poor Clover Prospects for 1910.

We have had no honey crop to speak of, and honey dew to winter on means disaster before spring.

I commenced the past season with 145 colonies, increased to 170, and got 3,300 pounds of comb honey, or about 22 pounds per colony, spring count. Does this sound like prosperity? If this is bad, last year was at least a little better. I commenced the season of 1908 with 68 colonies, closed with 145, and secured 7181 pounds, or over 105 2-3 pounds per colony, spring count. I wintered every colony.

But with 170 colonies now, I do not expect to have 100 alive next spring. I extracted the black stuff out of the brood-nest of one out-yard, which may winter better. But as we had a terrible drouth and no show for a fall crop, I did not extract from the other yard.

The clover outlook is poor, as the drouth killed most of the young clover that started in spring during the wet time we had. So the bee-prospects for the coming season are anything but bright. This is the condition over a big portion of the Central States, notwithstanding a certain usual report of fine show for a clover crop in 1910. I think we ought to have the truth, whether good or bad. An intelligent reader who has carefully followed the reports in bee-papers, of crops and conditions, need not be told that we will not have any big crop of clover honey, generally, next season. Of course, some sections or localities will have good crops (always do), but no matter what reports come in, a certain publication usually publishes that clover prospects were never brighter. Having said this, I want to say, also, that the American Bee Journal has tried to give us conditions just as they are. We all thank you, and appreciate your honesty in this and also other interests of bee-keepers generally.

I run out-yards on somewhat of Dr. Miller's plan.

Cantril, Iowa. A. B. TACKABERRY.

Keeping Bees in a Bee-Shed.

The picture is one of my bee-shed apiary of 20 colonies situated in the suburbs one-half mile from the city, near the most beautiful park in the State. The lot on which the apiary is located is 80x120 feet, set with small fruit; 50 red raspberries, 25 blackberries, nicely trained to tree-shapes and tied to stakes, 600 strawberries, 40 dwarf pears, a few plums and currants, also two large beds for vegetables. These added to the profits from the bees make a very profitable investment. The small cottage in the picture is furnished with easy chairs. On the table will be found the late number of the American Bee Journal and other bee-publications and literature. The bee-people often drop in and discuss the good and bad of the bee-business, as well as the best methods of securing a large honey-flow.

These 20 colonies of bees take very little of my time, other than putting on the supers and taking off the honey, and a little extra time during the swarming season, cutting out queen-cells. As to the pleasures of bee-keeping, there are many. Among other pleasures, who does not enjoy sitting by a hive and watching the little busy workers coming and going hither and thither, each one doing its part, gathering the honey from the meadows far and near.

THE BEE-SHED.

For keeping bees on a small scale where you do not have the room of the farm or the shade of the apple orchard, I am in favor of the bee-shed. I suppose the majority of the bee-keepers throughout the country are those having from 2 to 25 colonies, and they are kept in the rear of the garden lot, or on small places. The shed gives a permanent and handy place for them. They are less liable to annoy any one, and I feel certain they keep to their place and work better.

I have ample room in the shed to work with the bees from the rear of the hive. I find the bees will not come into the shed and bother while working with them as they do out in the open. I can work with the bees on sunshiny or rainy days, whenever you may have time. This is very important to those who are engaged in other vocations than bee-keeping. Many persons who keep bees are employed at inside work, and for them to go out in the middle of the day in the hot

American Bee Journal

sun, is at last uncomfortable, and, in many cases, may be injurious. The shed is ventilated with two small windows, and all work done in the shade with comfort.

The shed should be built wide enough to store the supers back of the hives, and everything will be handy and convenient, which is very desirable when you have only a small space to be given to bee-keeping. The shed is built so the sun shines on the front of the hives early in the morning, warming the bees and giving them an early start.

Shed Apiary of E. F. Giles, of Altoona, Pa.

Hives and Management.

I use double-walled hives, winter and summer, and winter the bees in the shed just where they stood during the summer. All moving of hives into the cellar, etc., is avoided, which simplifies the work of bee-keeping very much. The shed protects them from the snows and cold winter blasts, and under these favorable conditions they winter fine. In the spring they are warm and protected, and breed up nicely for the honey-flow.

I use the 8-frame hives, and during the past season had one swarm. As soon as the colonies are strong enough with bees in the spring, about 2 weeks before the honey-flow I make whatever increase I may desire, artificially. I take 2 frames of bees and brood from a hive, put them in a new hive, give a queen-cell, or a queen. In the old hive I put in place of the frame taken out 2 frames of foundation. In a short time the new frames are filled with brood. In the new hive I add frames of drawn comb or foundation from time to time, and by fall they are a strong colony, and winter well. During the honey-flow I cut out the queen-cells about every 10 days, and give the bees plenty of super-room.

I believe the cutting out of the queen-cells, giving plenty of super room, and artificial increase early in the season, form one of the best methods to control swarming. As swarming is a natural conditon, I do not believe it can be entirely wiped out. I run my apiary for comb honey.

The first super I put on is of small extracting frames made to fit an 8-frame super, that takes a 4¼x4¼x1⅞ honey-box, frame filled with full sheets of foundation. The bees seem to take to this readily, and when they get a good start in the extracting frames, I place under it a super containing the one-pound honey-boxes.

I note the bees draw out the comb in the little extracting frames well, and fill it with honey, which seems to be wider and fuller than in the one-pound boxes. It is fine for table use. I put full sheets of foundation in all frames and the one-pound honey-boxes, thereby helping the bees as much as possible in their work. Under this system of handling bees, which I have learned through the American Bee Journal, and a few little things which I have picked up through experience, it has proved satisfactory to myself, and the past season I had colonies that stored 50 to 150 pounds of comb honey, with only one swarm.

Altoona, Pa., Aug. 2. E. F. Giles.

A Beginner's Experience with Bees.

A little experience a friend and I had with this our first venture with bees, while not very encouraging, was at times quite laughable.

About May 11, 1909, we ate our suppers with a rush and put for a stable. The owner told me to take an old, lame horse to go after the bees, but when we saw the stable boy lead him out to water, we protested that he was too lame, and for the humane part we would rather not use him. I told the man to give me any other horse, and if it was not all right I would fix it with my brother-in-law, he being owner of the horses. So, after much talk, he consented to give us another, and we just spun right over the road about 6 miles into the country.

Well, we got our bees, (3 colonies), and tied them in the wagon, and started for home. Everything went fine for about 3 miles, other than our feeling cold, and my friend complained of his fingers feeling quite cold; but all of a sudden he yelled, "Look out!" And sure enough, I did. But it was a case of the horse shying and putting us into the ditch, though he never purposed to stay for a second.

When our senses were collected we found that we were lying in a puddle of water so deep that when I stood up it was over the tops of my rubber boots. Everything was dumped out but the horse, and he took French leave.

Our bees were in box-hives, and after fooling for 15 minutes or more we succeeded in relighting our lantern and righting our hives. A fine predicament, 3 miles from home, and soaking wet!

Our first thing was to find a telephone, and after talking over the wire, we decided we had better go for home. Yes, we had to hoof it all the way, and found the horse browsing near the stable. Then we took the old lame horse and went home for a change of clothes and a bite to eat. After that, away we went for what was left. We put our horse up, ate our breakfast, and then it was just time to go to work.

We have had lots of joshing and laughing about that night trip of ours. But our courage is still good, and we hope to be heard from as producers later, though the honey crop has been a total failure around here this year. I think I have had more hard luck tor a beginner than is meant for one man in a dozen years. But, then, it may be worth a good many dollars to me later on.

E. H. Bissell.

Brewer, Maine, Dec. 25.

Letter from a Finland Bee-Keeper

To my bee-keeping friends in the United States and Canada:

It has been my desire to express my feelings towards my bee-keeping friends in North America, by means of an article in one of the bee-papers of that country. When I left Finland with the intention of learning bee-keeping in America, I never thought that I would like it there as well as I did. Though the climate did not agree very well with me, the people and the conspicuous political and social freedom certainly won my sympathy and commendation, and the bee-keepers, especially, showed such great friendliness and hospitality, though I was a perfect stranger to all of them, that I am obliged to say that I felt sorry to leave a country of such remarkable characteristics.

It might interest some of you to listen to a short account of my entire trip to your country, how it was started, and how it was finished.

In the fall of 1907 I visited my brother, who, for many years, had been a very successful bee-keeper. I had left a technical college for lack of interest, and one day we were discussing the important question of my future. My interest in bee-keeping had been aroused at the time when my brother bought his first colony of bees, but I had never owned a bee myself. Brother knew that it would do me good to see some of the world while young (I was then 22), and—why not go to America to study bee-keeping? Among other bee-papers he had been reading some of the American, and we knew the names and methods of some of the most prominent bee-men of your country.

I had secured a position with Mr. R. F. Holtermann, of Canada, for the season of 1908. I wanted to spend the previous winter in America, too, but I had no position in view. Depending upon good luck, I sailed October 16, 1907, from Helsingfors, Finland, and three weeks later I landed in New York City. My plan was to go to Medina, Ohio, and I arrived there on a Saturday, and the next Monday my work began with the A. I. Root Company. They were kind enough to give me an opportunity to work in their factory, allowing a thorough study of modern bee-supplies.

I afterward went to Brantford, Ont., entering the position as assistant to Mr. Holtermann. The time spent with this splendid bee-keeper was of very great importance to me. After working half a year with him, I again secured a position with the A. I. Root Co., where the forepart of last winter was profitably spent. But I had a desire to see the South—the land of flowers and honey; and, about Feb. 1st, a ticket for Texas was bought. There I spent a month with John W. Pharr, getting some very valuable information about queen-rearing.

March, April and May, 1909, were spent with J. W. K. Shaw & Co., in Louisiana. Here I grafted my first queen-cups, and learned in a practical way the principal "tricks" of the queen-trade. But the heat of the South did not agree with me (you must remember that our home is situated at 60 degrees north latitude, or the same as South Greenland, though that country is colder than ours).

Fortunately I secured a position as assistant apiarist with Messrs. C. P. Dadant & Sons, of Illinois. My stay with these splendid people was not only a pleasure, but also of great instructive value to me.

Paul Mickwitz.

By this time the government of Finland aided me with $300, which should be used for traveling among prominent bee-keepers in the United States and Canada. This was accomplished during the months of last August and September. Several dozen bee-keepers in various States were called upon. I had many more on my list, but it being so late in the season, I am sorry to say my time was limited, and the route had to be drawn as straight as possible.

Now, I want to extend my sincerest thanks to all the bee-keepers I visited, for all their hospitality and kindness in answering questions pertaining to bee-keeping, etc., also to all those ladies of the house who had extra work for my sake.

I am at home. The cold, Northern winter is fast approaching, and our bees ceased long ago to fly about the fields. Next summer I will start a little apiary of my own, and, believe me, I am anxious to put into practise some of the valuable information secured in your country. PAUL MICKWITZ.

Helsingfors, Finland, October, 1909.

[We are glad to give a place to the foregoing appreciative letter from Mr. Mickwitz. As mentioned in these columns before, we had the pleasure of meeting him several times when in this country, and he is certainly a promising young bee-keeper. We shall hope to receive something from him from time to time about bee-keeping in Finland, after he has had opportunity to try out some of the American methods of bee-keeping that he learned while here. In the meantime we wish Mr. Mickwitz all the success he anticipates.—EDITOR.]

Poor Season—Feeding Bees.

The past was a poor season for bees in this part of the country. In early spring it was so cold that there was no bloom to speak of. Fruit-bloom was nearly all killed, so the bees got nothing until the middle of June, then the weather turned warm, and basswood, sweet clover, and alfalfa came into bloom, and we had the best flow of honey that I ever saw for 3 weeks; then it ended as suddenly as it begun. When the honey-flow started the hives were empty, as far as honey was concerned, and when it ceased the brood-chambers were full, and nearly all of the colonies had filled one super, and some were starting to store in the second super, but there was very little of the honey sealed. Then we had a drouth that lasted till Sept. 1st. By that time the hives were about empty of honey. The bees had taken all of the honey out of the supers and the swarms were starving. By the last of September almost all of the swarms had starved.

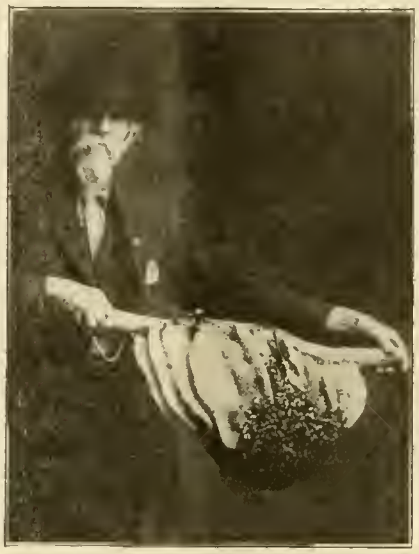
After that we had rains, and the asters bloomed for one month, so all of the colonies that did not swarm will have enough to last them till spring. As I enquire of the farmer bee-keepers how their bees are, they say that 2 out of 3 colonies are dead, and the one that is alive will not live till fruit-bloom next spring. I don't believe there will be 20 percent of the bees alive next spring around here. The owner thinks there is no use to try to feed them. In October I fed all of my bees that were short of stores. Some that did not have more than 5 pounds of honey I fed sugar syrup. I gave them 10 pounds of sugar in 5 pounds of water, and now I give each of them a cake of candy weighing 6 or 8 pounds, made from sugar and water. I put one quart of water in a dishpan on the kitchen stove and, when the water begins to boil, I pour in the sugar and keep stirring all the time. When it gets so that it will form a lump when dropped into cold water, then I remove the pan from the stove and keep stirring until it begins to grain. Then I pour it into a bread-pan, and after it is cool I place it on top of the brood-frames, first laying 3 or 4 one-inch sticks across the frames to give a passage for the bees from one comb to another. Over the candy I put burlap cloth, then some newspapers, then put an empty super on filled with dry leaves. Then I put on a weatherproof cover; then I feel satisfied that they will winter all right. I don't put anything in the candy, and have never had any loss of bees so treated, or any trouble with the candy getting so hard that the bees could not make use of it during the winter. After warm weather comes in the spring, if there is any candy left, I melt it into syrup and feed it in a divison-board feeder to stimulate weak colonies. J. L. YOUNG.

Manhattan, Kans., Dec. 4.

A Rare Tree Swarm of Bees.

I am sending a photograph of myself and a large, fine swarm of bees that I found September 6, 1909, hanging on a limb 1¾ inches through, 43 feet from the ground, in the open, without any protection whatever, with combs 2 feet long on the limb, and 13 inches deep. At the time I found it, it was completely covered with bees, and at first sight it resembled a young bear hanging with his back down. Two weeks later I went with a spring wagon, extension ladder, a box, and ropes, to get it.

I went up the tree, roped the limb properly so it would hang when cut off just as it was before, sawed it off, and from where I was I lowered it slowly near to the ground, fastened the rope securely, and went down. Then I took a sheet of cheesecloth, slipped it under the bees, wrapped it up snugly to the cluster, and tied at both ends of the combs so no bees could get out; then the limb was cut off a little beyond the combs at each end, set in a box large enough not to mar the combs, and taken home 13 miles, in safety, with the loss of but very few bees.



MR. GUERNSEY AND SWARM ON LIMB.

After a rest of three days I took them in the box to Ionia (2½ miles), into a photopraph gallery and lifted them out and held them as you see them, 5 minutes or more, and had several views taken. Only 3 bees left the cluster and went to the skylight. It was a fine, warm day.

Then I gave an exhibition, as you see them here, on the streets for several hours; brought them home, and packed them in their little box where I expect to winter them successfully outdoors, as I winter my bees outdoors exclusively. Next season I will confine them to a certain space and make them build the combs as I want them, to my fancy, then hang it out on a tree in the open. A swarm like this I have never been able to find, or ever heard of one in Michigan, although it is a common thing in a warm climate.

Ionia, Mich. A. H. GUERNSEY.

Ontario County, N. Y., Convention

The Ontario County (N. Y.) Bee-Keepers' Society will hold a meeting in the Town House at Canandaigua, N. Y., on Jan. 17 and 18, 1910, to which we would cordially invite you.

Naples, N. Y. F. GREINER, *Sec.*

Wisconsin State Convention

The 31st annual convention of the Wisconsin State Bee-Keepers' Association will be held at the Court House, in the city of Madison, Wednesday and Thursday, Feb. 2 and 3, 1910, beginning at 10:30, Wednesday morning.

We have the promise of papers from Mathilde Candler, F. Wilcox, Harry Lathrop, George W. York, A. C. Allen, and N. E. France. These are all well-known names, and their papers will be such as to create interesting discussion and bring out plenty of questions. We also have other prominent and well-known bee-keepers who are considering the writing of papers for this convention, or in some other way giving the benefit of their experience and years of observation. The Question-Box will be an important feature.

We advise all who will attend to stop at the Simons Hotel, which is always headquarters for the bee-keepers. The rate is $1.35 per day, but in order to secure a room, you must engage it several days ahead, and enclose $1.00 in your letter. This is a clean house. No bar in connection.

We invite every member to renew his membership, and every bee-keeper to become a member. The annual dues for the Wisconsin State and National are $1.00 for both, or you may become a member of the Wisconsin State alone by sending 50 cents to the Secretary.

Let us hear from you with your dues, together with your questions, and, if possible, attend the convention.

Augusta, Wis. GUS. DITTMER, *Sec.*

Michigan State Convention

The annual convention of the Michigan State Bee-Keepers' Association will be held in the parlor of Hotel Wentworth, corner E. Michigan and Grand Avenues, Lansing, Mich., Feb. 23 and 24, 1910. A fine program is in course of preparation, and will appear in the February number of the American Bee Journal. All are invited.

L. A. ASPINWALL, *Pres.*
E. B. TYRRELL, *Sec.*,
230 Woodland Ave., Detroit, Mich.

Eastern Illinois Convention

The second annual meeting of the Eastern Illinois Bee-Keepers' Association will be held in a hall adjoining the Junction House at St. Anne, Ill., Jan. 31 and Feb. 1, 1910. A good program has been arranged, and we expect a large attendance. All bee-keepers are invited to come. The question-box method will prevail. Special rates at the hotel. Those desiring to attend can correspond with either the president or the secretary.

REV. HOWARD, *Pres.* H. S. DUBY, *Sec.*
Gardner, Ill. St. Anne, Ill.

To Illinois Bee-Keepers

At the December meeting of the Chicago-Northwestern Bee-Keepers' Association it was voted to join the National and the Illinois State Associations in a body. The annual membership fee to the Chicago-Northwestern is $1.00. This dollar will not only make you a member of the three associations, but will entitle you to the reports of the three associations, published in one volume, bound in cloth. The book alone is worth the price of membership. Send dues to Louis C. Dadant, Secretary Chicago-Northwestern Bee-Keepers' Association, Hamilton, Ill.

Notice to Oklahoma Bee-Keepers

Bee-keepers from over the State met at Guthrie, Dec. 30, 1909, and a State Association was perfected with the following officers:

President, N. Fred Gardner; Vice-President, Geo. H. Coulson; Secretary,

F. W. VanDeMark; Treasurer, G. A. Garrison.

A Constitution and By-Laws were adopted, and the semi-annual meeting will be held in Guthrie, April 4, 1910. The annual meeting will be held at Stillwater some time in January, 1911, during the Farmers' Short Course. The Association will at once incorporate and endeavor to increase and encourage the production of honey throughout Oklahoma. The following bee-keepers were present: Geo. H. Coulson, Jacob Goenwein, G. A. Garrison, R. J. Martins, J. A. Nininger, E. Q. Couch, C. C. Platt, Keith Sellars, C. S. Mayhew, N. Fred Gardner, F. W. VanDeMark, and A. Rhoads and J. H. Tate, by proxy. F. W. VanDeMark, *Sec.*

Stillwater, Okla., Dec. 31, 1909.

14¾ Cents a Rod
For 22-in. Hog Fence; 15 3-4c for 26-inch; 18 3-4c for 31-inch; 22c for 34-inch; 25c for a 47-inch Farm Fence. 60-inch Poultry Fence 33c. **Sold on 30 days trial.** 80 rod spool Ideal Barb Wire **$1.55** Catalogue free.
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New Carlisle, Ohio.

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If you buy my plants you get good, strong, healthy ones that are grown in a natural strawberry country where soil, climate and season each help to make hardy and productive plants. You get plants true to name. Whether you plant a dozen or 100,000 your order can be filled promptly from the stock of 1910 plants—I never grew a finer 200-acre lot of them. **Send for 1910 3-color catalog. It is free, and I want you to have a copy of it.**

W. W. THOMAS
The Strawberry Plant Man
152 Main Street, Anna, Ill.

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The honey produced is a clear white product of unusual flavor, and there is a steady demand at remunerative prices.

The climate is ideal for both bee-life and honey-making. The honey ripens rapidly and goes to market in perfect condition.

I have a number of illustrated pamphlets descriptive of the country served by the Santa Fe. I will gladly mail you copies on request.

C. L. SEAGRAVES, General Colonization Agent, A. T. & S. F. Ry.,
1115 Railway Exchange Building, CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

Read What Purchasers Say

I received Farm Journal and "Poultry Secrets," and am very much pleased with both. The secrets are worth their weight in gold. Why, I paid $5.00 for the sprouted oats method. You certainly give a fellow over his money's worth.

Andrew F. G. Morey, Utica, N. Y.

I purchased a copy of "Poultry Secrets," and find many helpful ideas in it, especially Dr. Wood's Egg Hatching Secret.

Mrs. F. T. Darnell, Westfield, Ind.

By putting within our reach these Poultry Secrets, you are doing a more philanthropic work than giving alms or endowing hospitals, for you make it possible for us to make both ends meet.

L. Boyce, Milwaukee, Wis.

Received your book of Poultry Secrets. It's an exceptionally instructive work, and worth $10 to any progressive poultryman. I would not care to take that for my copy if I could not get another.

Robt. F. Kingsland, Montville, N. J.

The Farm Journal came to hand, and later Poultry Secrets also arrived, all of which I was very glad to receive, and have been greatly interested in reading same, and think you are doing a glorious work in diffusing such valuable knowledge for so little money.

F. B. Meade, Boston, Mass.

As to "Poultry Secrets," I will say I have lectured on this subject over the greater portion of this State for the past 15 years, and have about every book that is published on this subject in my library, and I consider this book of yours the most valuable I know by far for the general public.

L. A. Richardson, Marine, Ill.

Judges Tell Poultry Secrets

Five famous poultry-show judges, known all over the country, contribute to the latest edition of "Poultry Secrets"—Michael K. Boyer's remarkable book. J. H. DREVENSTEDT tells his method conditioning

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I. B. GRAY'S secret of fattening stock quickly and obtaining an extra price for it.

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In short, the new edition contains the cream of the exclusive knowledge of dozens of America's foremost poultrymen, and you should have it if you have even a few hens in a back-yard. Do not hesitate; no confidence has been violated; every secret has been

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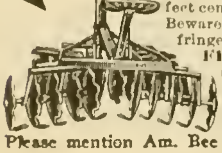

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We are accumulating quite a large stock of bee-yard engravings and other pictures used from time to time in the American Bee Journal. No doubt many of them could be used by bee-keepers in their local newspapers, on their letterheads, on souvenir cards, or in other profitable or interesting ways. If we can sell them it will help us to pay for others that we are constantly having made and using in these columns.

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How About Your Advertising?

Have you anything to sell? Any bees, honey, hives, or anything else that you think the readers of the American Bee Journal might want to buy? If so, why not offer it through our advertising columns? See rates in the first column of the second page of every number of the Bee Journal. We try to keep our columns clean and free from any dishonest advertising. Such can not get in, if we know it.

Our Clubbing List.

We have arranged with some of the best magazines and other publications to offer them in connection with a year's subscription to the American Bee Journal. If there are any others that you would like to subscribe for, be sure to let us know what they are, and we will quote you price. Our list so far as made up is as follows, the prices applying only to the United States, outside of Chicago:

American Bee Journal one year (75 cts.)		Both
With American Agriculturist...	$1.00	$1.75
" Bee-Keepers' Review (new	1.00	1.85
" American Poultry World..	.50	1.40
" American Sheep Breeder.	1.00	1.85
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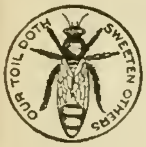
These are very pretty things for bee-keepers or honey-sellers to wear on their coat-lapels. They often serve to introduce the subject of honey, which might frequently lead to a sale.

NOTE. — One bee-keeper writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of these buttons], as it will cause people to ask questions about the busy bee, and many a conversation thus started wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."


OUR TOIL DOTH SWEETEN OTHERS

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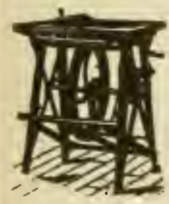

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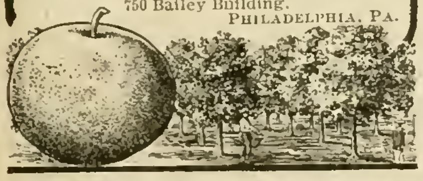

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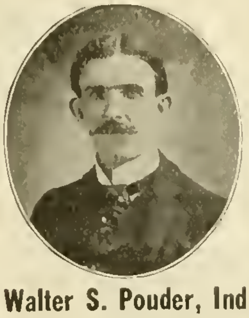

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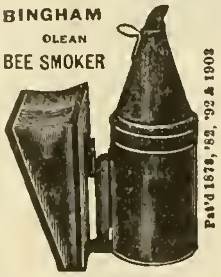

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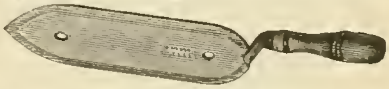

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One 60-lb. Can, per pound	10c
Two " " "	9½c
10 or more Cans......................	8½c

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All grades of Comb and of Extracted. 2000 cases of Buckwheat Comb wanted at once. What have you to sell? Third car of water-white Sage just in. Write for prices.

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10A34t Please mention the Bee Journal.

'Twill be in the Review

Dr. Jones, of Minnesota, has published a little book describing a simple system of management, whereby swarming is absolutely prevented—no clipping of queens' wings, no caging of queens not even necessary to look for queens, no pinching of queen-cells, no shook-swarming, no dividing, no extra expense nor fixtures, yet a good crop of honey is secured.

The book retails for 25 cts.; and is copyrighted, so that no one has a right to copy any of it without permission—to do so brings a liability of prosecution—but the Bee-Keepers' Review has paid the author a good round sum for the privilege of copying the *entire book* into its columns—no other journal can print it unless similar arrangements are made with the author.

The first installment will appear in the February Review, and the entire book will be copied before the opening of the swarming season—probably be finished with the April issue.

The Review is $1.00 a year, but there are still left a few sets of back numbers for 1909, and, so long as the supply holds out, these back numbers will be sent free to the man who sends $1.00 for the Review for 1910. In other words, you can get the Review for 1909 and 1910 for only $1.00; and, as already explained, the Jones book on swarm-prevention will be copied into the early issues.

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Cornell Incubators and Mann Bone Cutter for sale at about half price.

232-Egg capacity Incubator, only	$15.00
364- " " "	18.00
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Mann Clover Cutter, iron stand.	6.00

Leg Bands, Poultry Markers, and Egg-Testers, at half price.

The above machines are slightly damaged, but about as good as new. Never used, but tested and guaranteed. Address,

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Our entire Process is ORIGINAL AND INDEPENDENT, and its entire Success is demonstrated by its EXCLUSIVE USE by thousands of Bee-Keepers in every part of the country, in preference to any other MAKE OR PROCESS.

We make a Specialty of Working your Wax for Cash.

Write us for Prices and Samples, which must be seen to be appreciated. We carry a full line of

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Honey and Beeswax

Chicago, Dec. 28.—The demand for honey of all kinds has been slack during December, but we are looking forward to the next two months bringing a demand sufficient to take the surplus now on hand. Fancy grades of comb honey sell quickly at 16c, with the under grades slow at from 1@3c per pound less. Extracted is in good demand for clover and basswood, which brings 8c, and the off kinds are from half to a cent less in price. Amber grades are steady at 6@6½c, with some at 7c. Beeswax in good demand at 32c, if clean and of first quality. R. A. Burnett & Co.

Boston, Jan. 1.—Fancy white comb honey at 16@17c; No. 1, 15@16c. White, extracted, 8@9c; light amber, 7@8c; amber, 6@7c. Beeswax, 30@32c. Blake, Lee Co.

Kansas City, Mo., Dec. 29.—The demand for both comb and extracted honey is good; the receipts light. We quote: No. 1 white comb, 24 section cases, $3.50; No. 2 white and amber, $3.25 per case. White extracted, per pound, 7½c. Beeswax, 25@28c.
C. C. Clemons Produce Co.

Cincinnati, Dec. 28.—The market on comb honey is exceedingly brisk, and has made an advancement. We quote comb honey, 24 sections to a case, in large lots, $3.50 per case; by the single case, $4.00. The market on extracted honey is good. Sage at 8@8½c per pound; amber in barrels, 6¼@6½c. Beeswax is fair at 33c. These are our selling prices, not what we are paying.
C. H W. Weber & Co.

Toledo, Dec. 30.—The demand for honey has practically ceased, as is usual at this time of the year, and as so many producers have held on to their crops there is a tendency to shove it out, which, of course, weakens the market, and prices have somewhat declined. We are quoting fancy white from 15@15½c; No. 1, 14½@15c; very little demand for darker grades. White clover extracted in cans would bring from 7½@8½c, and is in fair demand. Very little demand for lower grades. Water-white sage we are quoting at 8½@9c. Beeswax is quite firm at 28@30c. The Griggs Bros. Co.

Indianapolis, Dec. 28.—There is a good demand for best grades of both comb and extracted honey, but jobbing houses are well supplied. Practically no honey is now being offered by producers, and jobbers are selling No. 1 and fancy white comb at 17@18c. Best extracted, 9@10c, according to quantity taken at one shipment. Poor demand for amber honey and no established prices. Producers are being paid 28@30 for good average beeswax. Walter S. Pouder.

Zanesville, Ohio, Dec. 28.—The local honey market is usually very quiet at the holiday season. For this time of year the demand is about normal. Producers should receive from the jobbing trade 14@15c for No. 1 to fancy white clover or raspberry comb honey, and for best extracted in 5-gallon cans, 8@8½c, delivered; wholesale prices ruling 2@2½c higher on comb, and 1@1½c on extracted. For clean yellow beeswax, producers are offered 28c cash, or 30c in exchange for merchandise.
Edmund W. Peirce.

New York, Dec. 29.—During the past few weeks the demand for comb honey has slackened off somewhat. There is still a fair demand for No. 1 and fancy white, but off grades and dark are rather neglected, and not in much demand. While our stock is not large, it is sufficient to meet the demand, and straggling lots are still coming in. We quote: Fancy white, 15c; No. 1, 14c; off grades, 11@12c; buckwheat and dark, 10@12c, according to quality. Extracted, demand fair, principally for California; prices ruling the same as our last quotation. Beeswax, steady, and in good demand at $30c.
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AMERICAN BEE JOURNAL

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FEBRUARY
1910

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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY
GEORGE W. YORK & COMPANY
146 W. Superior St., Chicago, Ill.

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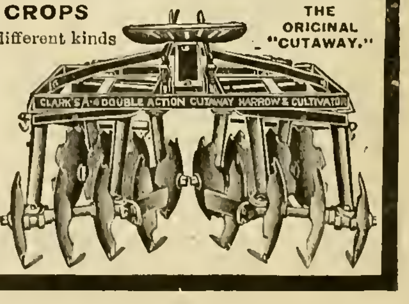
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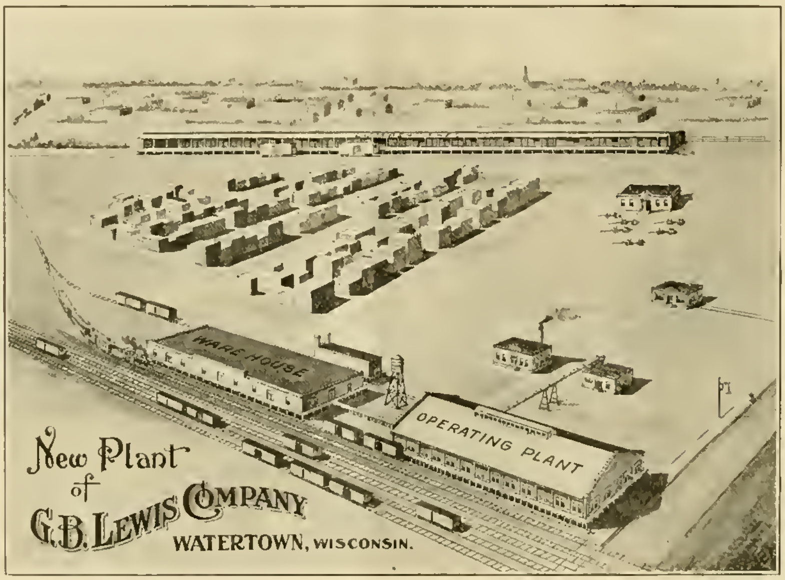

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AMERICAN BEE JOURNAL
L.L.LANGSTROTH

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

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GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., FEBRUARY, 1910

Vol. L---No. 2

Editorial Notes and Comments

Overstocking and Infringing

G. M. Doolittle having commended a man as conscientious who "would not think of locating in a territory already occupied by somebody else," Morley Pettit, in Gleanings, thinks the man is wise, rather than conscientious. He says: "The act of overstocking is a boomerang. Unlike mercy, it curses him who gives and him who takes." Of course the idea is that the man who infringes on the territory of another so as to cause overstocking has thrown a a boomereng that will recoil upon himself. Editor Root footnotes the article by saying:

> There can be no question but that, when a man brings a lot of bees into a locality that is already well stocked, he is working against his own interests. But the question is, "How are we going to educate him so that he will be 'wise' enough not to locate there in the first place?" Mr. Pettit has presented a phase of the question that has not been receiving the attention it should.

Now, who has the answer to the question as to how a man is to be educated to look out for his own interests? Very likely, Mr. Root, there are some who will suggest that in some cases where men can not be educated to become "wise" to their own interests, other steps are taken. The man who is "wise" will never steal, nor drink whiskey, but no system of education has yet been discovered so effectual but that there are still thieves and drunkards. But laws against stealing, with penalties attached, are supposed to be necessary for those who will not otherwise become "wise," and there are among bee-keepers some who are cranky enough to suppose that there ought to be laws to compel a man to be "wise" in the matter of infringing on another man's territory.

Advantage of Bulk Comb Honey

Among the advantages claimed for bulk honey by J. J. Wilder, in Gleanings, is this:

> In the production of bulk comb honey all the surplus honey can be removed at the end of each flow, whether the frames are full or not, and the honey is as nice, for it can be saved and will bring its full market value.

The idea probably is that the honey may be extracted from the partly filled combs at the end of any particular flow, the combs to be used again in the next flow.

Variation in Basswood Bloom

That close observer, G. M. Doolittle, reports in Gleanings, that in his vicinity the very earliest blooming tree opened its buds last year July 12. Then other trees came into bloom on successive days until July 24, on which date the very latest opened its first bloom. Thus there was a variation of 12 days between the earliest and the latest bloomer. That would make it seem that the basswood harvest should be in any year more than 12 days in duration. But there are years of failure, when there is no basswood harvest; and it is not impossible that in other years the failure may affect all but the earliest or latest, thus cutting down the time of yield to less than 12 days. Possibly, too, in other localities the variation between earliest and latest may be greater or less than at Borodino, N. Y.

Flour Plan of Queen-Production

In England the plan of uniting colonies by sprinkling the bees with flour is quite in favor, although for some reason it has not been used much in this country. But Elmer J. Weaver reports, in Gleanings, that he has been using it successfully in introducing queens. He says:

> The method I employed with success was to remove the old queen, place the frames back in the hive, and dust several small handfuls of flour over the tops of the frames in such a manner that the flour got well mixed with the bees between the frames. The queen was then coated thoroughly with flour and run down between the combs, followed by a good sprinkling of flour.
>
> This plan was not entirely successful when practiced with queens received through the mails, so was modified in the following manner: After removing the old queen, the bees were shaken from the combs into the bottom of a hive, dusted thoroughly with flour, and the queen coated with flour was dropped among them. The frames were then replaced carefully, and the hive not opened again for a few days.

In the same paper, Mel Pritchard, an experienced queen-rearer, thus reports his success with flour in introducing virgins:

> At one time last summer I had quite a surplus of virgin qeens that were about six days old; and, wishing to introduce them as quickly as possible, I decided to try the flour method. I took the virgins, one at a time, and threw them into a tin baking-powder can half full of flour, and shut them in. As six-day old virgins are very active they tried to fly around in the box, and in less than one minute they were so completely covered with flour that they could not fly at all. While in this condition I picked them up on the end of a small twig and ran them in at the entrance of the nucleus-boxes. Forty virgins were thus treated, and about 75 percent of them were successfully introduced. At the same time, three laying queens were successfully introduced to full colonies by the same plan.

How Much Honey Does a Bee Gather?

In Gleanings, G. M. Doolittle makes an estimate of what a bee can do in the way of gathering in its lifetime, setting it at an ounce of nectar, or ⅓ ounce of honey, with conditions most favorable for gathering. A Stray Straw in the same periodical, on the supposition that a colony with a field-force of 30,000 workers each day for 26 consecutive days (26 days being the field-life of a worker) gathers 15 pounds of honey, including the amount stored and the amount consumed by the colony, figures that a bee during that time may store one-fifth of an ounce of honey.

What a bee can do under the most favorable circumstances is quite a different thing from what the average bee actually does do in its lifetime. It may not be without interest to make some attempt to answer the latter question. Of course, many a bee spends its lifetime when little or nothing can be done, and the average of all must be taken.

It is hard to have any positive data, but for the sake of having something to start with, let us suppose that during the season a queen lays eggs that will be the equivalent of 1000 eggs a day for half the year, or 182 days. That means that the season's gathering must be divided among 182,000 workers.

Suppose also that the colony stores 75 pounds of honey, to which must be added what the colony consumes during 12 months, 200 pounds, according to Adrian Getaz. This gives us 275 pounds, or 4400 ounces. Dividing that among 182,000 bees gives .02417, or about one-fortieth, of an ounce to be credited as the life work of each worker.

That may or may not be somewhere near the exact truth, but it is not hard to believe that there is a very wide difference between the average life work of a bee and what it can accomplish when it has the best chance.

Requeening for European Foul Brood

John T. Greene, who had about 300 cases of black brood, or European foul brood, reports in Gleanings, that becoming discouraged with shaking and disinfecting hives, he finally gave up all other treatment, and merely requeened with young Italian queens, leaving all the old combs in the hive, and was "greatly pleased to find about 95 percent of the colonies thus left, without a trace of the disease at the close of a very light buckwheat flow."

Measuring Cells in Honey-Comb

An easy way, partly copied from L'Apiculteur, is given in Gleanings. Lay upon the comb a rule marked with eighths or smaller measurements, with the end of the rule corresponding with the side-wall of a cell. Look along the rule until the wall of another cell corresponds with some mark on the rule, and count the number of cells thus enclosed. Thus, suppose 9¼ inches be the measurement, and 46 the number of cells. Divide 9¼ by 46, and you have .201087 of an inch as the diameter of a cell. Again, divide 46 by 9¼, and you have 4.9729 (practically 5) cells to the inch.

A mistake is sometimes made in estimating the number of cells in a square inch. Because there are 5 cells to the inch, it is at once taken for granted that there are 5 times 5, or 25 cells to the square inch. That would be correct if the cells were square; but being hexagonal there are, instead of 25, 28 13-15 cells to the square inch; quite a little difference when the number of cells in a whole comb is to be estimated.

It may be desired to measure the number of cells in a given surface without being obliged to figure on the size of the hexagons. Lay your rule on the comb, as before described, horizontally, and make your measurement. Now measure vertically, having the end of the rule at a given point in a cell, and find where the corresponding point in another cell coincides with a mark in your rule. Multiply together the count of the cells in both directions, and you have the number of cells in the space measured, which will, of course, be found by multiplying the number of inches horizontally by the number vertically. Divide the total number of cells by the number of square inches, and you have the number of cells to the square inch.

Sections Without Separators

As heretofore mentioned, W. K. Morrison claims that section honey may be successfully produced without separators, the chief stipulation being narrow sections, and beside these there must be full sheets of foundation and level hives. Discussing the matter in the Bee-Keepers' Review, Adrian Getaz says that the bee-keeper who thinks that by fulfilling these conditions he will always be as successful as Mr. Morrison is likely to be wofully disappointed. Mr. Getaz sells his honey in the local market, so that absolute regularity is not necessary, and he has produced sections mostly without separators. He thinks that without separators four bee-way sections are best, and that the thickness of the sections makes only a little difference. In addition to the conditions mentioned, he adds as essential: a heavy flow, a strong colony, and warm weather. With either of these conditions lacking, there is likely to be more or less failure.

It is perhaps hardly worth while for any one to experiment with regard to producing sections without separators if the honey is to be packed for shipping; for a home market it is possibly worth while, as, under some circumstances, if not under most circumstances, a little more honey may be obtained without than with separators.

Chunk Honey in the North

M. P. Cady (in the Bee-Keepers' Review) reports that some half-dozen years ago he was quite taken with the idea of producing bulk, or chunk, honey, and gave it a trial (supposedly in Wisconsin) on an extensive scale. He says:

> In order to test thoroughly the desirability of the "chunk" honey, and at the same time to develop a market for the new product, a good salesman was employed to solicit orders direct from the consumers. A fine sample in a flint glass pail was used in securing orders. The salesman explained the superior money value of the chunk honey, and, being a silver-tongued hustler, he made sales very readily at 12½ cents per pound, at the same time selling, to those who preferred, extracted honey at 10 cents per pound, and section honey at 15 cents; however, most of the sales were "chunk" honey.
>
> While the immediate results were very satisfactory, the final results were disappointing. An occasional patron was pleased with the chunk honey, but more than nine-tenths of the purchasers were emphatic in expressing their preference for *either* extracted or section honey; and finding it impossible to make sales of the chunk honey, I was obliged to discontinue its production.

Consumers objected that the honey was mussy, was not equal in flavor to section honey, and the candying of the extracted honey used to fill up the crevices spoiled it for table use. For some reason these objections do not prevent chunk honey from being popular farther south.

Miscellaneous News-Items

H. L. Jeffrey—An Old-Time Bee-Man

Mr. James McNeill, of Hudson, N. Y., has sent to this office a copy of the New York Herald, which contains an account of the interview of a reporter with H. L. Jeffrey, now 63 years of age, and known to the older readers as a former occasional contributor to bee-literature. Nearly a full page is occupied with the report, which is chiefly interesting as showing how much space can be occupied with so very little real information about bees. Mr. Jeffrey will probably smile when he reads that he "knows more about the savage little honey-gatherers than any other man on earth," and that not till he had solved such mysteries was any one able to answer the question, "Why were the cells of different size, and why did the bees build always on a plumb line, and why was there only one queen in a hive, and why were a lot of other things?" If, instead of having the space filled by a man who cheerfully confesses "woful and utter ignorance concerning the insects," one-tenth of the space had been filled with matter directly from Mr. Jeffrey's pen, its readers would have had ten times as much real information about bees.

◆

Young Bees for Queen-Rearing

The importance of having young bees for queen-rearing is not as generally understood as it should be. Sometimes queen-rearing nuclei are made up entirely of old bees, as when a nucleus is formed by moving a colony from its stand and depending upon the returning bees, which, of course, will all be field-bees. An article from the late E. L. Pratt, in the British Bee Journal, has the following:

> I am entirely convinced that both the queen and the drones are stimulated to nuptial flight by the workers when they have

arrived at ripe age, not only by feeding, but by grooming and communication as well. I have been closely watchful of this, and have gathered some data which may be interesting to the student. By repeated experiment I have found that if a colony is entirely made up of old bees—so old that they are incapable of nursing—it becomes impossible for them to create in a virgin that desire to fly and mate. She may fly, but she does not seem to be attractive to the drones, as she repeatedly returns unsuccessful in her flights.

As a result of the above condition the virgin simply lives among the bees as a worker-member lives, not even becoming a drone-layer, owing to the lack of nurse-bees to develop her ovaries by feeding. Even young larvæ given to such a colony will be neglected, and will frequently die of starvation. If emerging brood is given, however, young bees will hatch, and at length begin to feed the queen, and in time the queen may begin to lay; but, having passed the mating age, she will not mate, so becomes a drone-layer. These experiments have proved to me that it is necessary for even a drone-layer to be fed and nursed by workers before it is possible for her to produce eggs.

As a conclusion, I believe that young bees are absolutely needed at the three fundamental stages of a queen, viz.: First, to produce the abundance of food needed fully to develop their queen in her cell; second, properly to stimulate her to flight for the purpose of mating; third, to develop the eggs in her ovaries after impregnation. Further, as has been previously mentioned in the papers, it is also necessary for the drones to receive their share of attention from the nurse-bees in order that they may become at all potent.

Editor Hutchinson and His Bees

The editor of the Bee-Keepers' Review has a streak of poetry in him which frequently manifests itself in his writings. In his January issue he becomes enthused over the condition of the bees in his cellar, and breaks out in this strain:

> "When I wake in the night there is actually a comfortable feeling comes over me when I think of those bees snuggled away there, sleeping away the winter with their heads pillowed on snowy combs of sweetness."

The brutally matter-of-fact bee-keeper will say, "My bees spend the winter with their *feet* resting on the combs, and the blacker the combs the better." But we may easily forgive the license of speech in one whose poetic soul thus lovingly expresses his feelings toward his little pets.

Slow Upward Ventilation for Winter

R. B. Ross, Jr., discussing the matter in the Canadian Bee Journal, is not in accord with those who advocate sealed covers in cellar-wintering. He asks Editor Root to make trial of 3 colonies varying in strength, with good stores, any kind of ventilation at the entrance, covers removed, and a heavy gunny-sack thrown over (with a newspaper loosely laid over, if the cellar is very cold.)

Spraying Fruit-Trees in Bloom

We have received the following from Dr. G. Bohrer, of Kansas:

On page 22, Mr. George W. Adams asks for information as to the laws in different States concerning the matter of spraying fruit-trees when in bloom. While here in Kansas we have no law upon the subject of spraying, we have a State Horticultural Society that holds annual meetings at which the matter of spraying is discussed every year. And while spraying is recommended, all agree that trees should never be sprayed while in bloom—for two reasons:

First, it destroys the fruit-germ to come in direct contact with spraying fluid.

Second, spraying-fluid will kill honey-bees—a thing well informed horticulturists do not wish to have occur, knowing that bees aid very materially in the pollination of fruit-bloom. They advise spraying *just before* the blossoms open out, and *soon after they drop off*.

While a number of our States have no law upon the subject of spraying trees, they are quite likely to enact such laws in the near future, as it is becoming more and more generally conceded that to spray is the only sure means of securing fruit free from injury by insects. And bee-keepers should make it a point to see their member of the Legislature and point out to them the importance of the law specifying that spraying must not be done when trees are in bloom, for the reasons above given.

Lyons, Kans, (DR.) G. BOHRER.

This is a *very* important matter, and one in which not only bee-keepers but horticulturists as well should be deeply interested. Spraying fruit-trees while in bloom is a two-edged sword—it is likely to injure the delicate and tender blossom, and also kills the bees that want to help Nalure produce a bountiful crop of fruit.

Bee-keepers should pass the word along, that the only safe and proper time to spray fruit-trees is *just before* the blossoms open, and *just after* blooming is over. To do it during the time between is to risk killing the bees and ruining the prospects for a crop of fruit.

Honey-Yield and Cold Weather

A report is given in the British Bee Journal which rather upsets one's ideas as to the effect of cold weather on the honey-flow. It refers to the heather harvest, as follows:

> September 3 was the best day, showing a gain of 10 pounds. The day began with a very heavy hoar frost, a shade temperature of 34 degrees Fahr., rising to 58 degrees Fahr. at midday. The wind was due north and very cold, so that in spite of a cloudless sky until 2 p.m., it was too cold to sit in the open air unless sheltered from the wind. The bees began gathering at 8 a.m., with a shade temperature of 48 degrees Fahr., a very heavy flow continuing until 10 a.m., when the temperature had reached only 52 degrees Fahr. After this the nectar intake rapidly slowed down, though carried on until 3 p.m. A suspicion of north wind or a hoar frost we had always regarded as fatal to heather-secreting.

To Help Our Advertisers Helps All

We want to invite our readers to patronize those who advertise in the columns of the American Bee Journal. Always be sure to mention the Bee Journal when writing to any of them. They want to know in what papers their advertisements were read. And such mention helps the American Bee Journal also, for when advertisers find that their announcements are read in this journal, they will not only continue to use its columns, but will often increase the space they use. And then we can have more money to spend on making the American Bee Journal better for you.

California State Convention

The California State Bee-Keepers' Association will meet at Los Angeles, Feb. 15, 16, and 17, 1910. It is expected to make this meeting the most interesting and instructive of any held in a long time on the Pacific Coast. Write to M. H. Mendleson, Ventura, Calif., for further information, if desired.

The Michigan State Convention

The annual meeting of the Michigan State Bee-Keepers' Association will be held at Hotel Wentworth, corner of E. Michigan St. and Grand Ave., Lansing, Mich., Wednesday and Thursday, Feb. 23 and 24, 1910. Rate, $2.00 per day, and the use of the parlor free as the convention room.

A very interesting program has been arranged, containing, besides the question-box, the following papers:

"A New Method of Getting Rid of Foul Brood," by Ira D. Bartlett.

"Size, Ventilation, and Construction of Hives," by R. F. Holtermann, of Canada.

"The Bee-Keeper's Real Problem," by E. B. Tyrrell.

"Some of My Experience as a Farmer Bee-Keeper," by W. J. Manley.

"Science and Theory of Bee-Keeping," by Hon. Geo. E. Hilton, ex-president of the National Association.

"A Few Suggestions," by N. E. France, General Manager of the National Association.

George W. York, president of the National Association, has promised to be present, and many others that we have not room to mention, have signified their intention of attending.

Many prizes are offered for exhibits of honey and beeswax. Send for program and prize-list, if interested.

If for any reason you cannot attend this meeting, but would like to take advantage of the benefits derived from having your name appear in the Association's Annual Booklet, send $1.00 to the Secretary, which will make you not only a member of the State Association, but also of the National, for one year. E. B. TYRRELL, *Sec.*

230 Woodland Ave., Detroit, Mich.

The Wisconsin Convention

This was held at Madison, Feb. 2 and 3, 1910. While the attendance was not large, the interest was good. We were present and enjoyed meeting the representatives of Wisconsin beedom once more. The officers for the ensuing year were all re-elected, viz.:

President, Jacob Huffman, of Monroe; vice-president, F. Wilcox, of Mauston; secretary, Gus Dittmer, of Augusta; and treasurer, A. C. Allen, of Portage.

We expect to publish a brief report later, in these columns.

The S. E. Minn. and W. Wis. Convention

The Southeastern Minnesota and Western Wisconsin Bee-Keepers' Association will hold its annual convention Feb. 22 and 23, 1910, in the Court House at Winona, Minn. There will be some good speakers present. All bee-keepers are invited.

O. S. HOLLAND, *Sec.*

Route 1, Winona, Minn.

Worth Many Times the Price.

I appreciate the American Bee Journal very much, and don't see how I can very well do without it, as some of the articles are worth many times a year's subscription alone. I expect to be a subscriber to the "Old Reliable" as long as I keep bees, so you may count on me as a permanent customer.

Jackson, Mich. H. A. RUSHTON.

Biographs of Beedomites

The New Officers of the National

With the exception of General Manager France, all the officers of the National Bee-Keepers' Association elected for 1910 are new ones. We thought our readers would like to know them better, so we put their pictures (excepting the president) on the front page this month, and herewith will be found their biographical sketches, which doubtless will be read with interest. Surely at the present time there is very little opportunity for criticism of the officers of the National Bee-Keepers' Association, on the grounds that they are not bee-keepers; most of them are rather extensively engaged in the business. Read the following sketches, and see if you do not feel that these are real men, and that you are proud of them as leaders in American beedom:

No. 1.—Vice-Pres. W. D. Wright, of Altamont, N. Y.

Wheeler D. Wright was born at Berne, Albany Co., N. Y., Oct. 3, 1851, and has been a resident of Altamont, N. Y., (formerly Knowersville) for more than 40 years. He purchased his first stock of bees in 1866, and has not been out of the business since. He built his first honey-extractor in 1870, of wood, coated inside with wax, as mentioned in the American Bee Journal for 1871, page 111.

In the 70's he reared Italian queens for sale, and issued a small catalog of bee-keepers' supplies; but soon concluded that there was more money for him in honey-production, which he made his sole business for several years. Later, on account of poor seasons, he concluded it was desirable to combine some other business with it, and for 12 years he conducted a local fire insurance business.

Having a general knowledge of carpentry and cabinet work, and being of a constructive turn of mind, Mr. Wright took up the study of architecture 20 years ago, and for 15 years has practiced that profession. Numerous buildings in Altamont and the surrounding country testify to his ability. He is a member of the Architectural League of America.

The largest number of colonies ever reached by Mr. Wright was 435. His number for 7 years was over 300 colonies; these were usually kept in two or three apiaries. In 1885, he produced over 24,000 pounds of surplus honey from 243 colonies, spring count, nearly all of which was in the comb. In 1887 his crop of surplus was nearly 22,000 pounds from 318 colonies. His total honey-production is over 100 tons; three-fourths of it in the comb. At present he keeps about 70 colonies.

Mr. Wright has been connected with the New York State Department of Agriculture for 10 years, in the capacity of inspector of apiaries. He has been thrice elected president of the young Eastern New York Bee-Keepers' Association. Twenty years ago he held the same office in a society with the same title.

Mr. Wright's life partner for 30 years was called to her Eternal home a year ago. A son and daughter also survive her.

It was our pleasure to meet Mr. Wright for the first time at the Detroit convention of the National, in 1908, where he appeared on the program and took an active part in the discussions. He is eminently qualified to fill the high position to which he has been elected in the National Bee-Keepers' Association, and we are delighted to have him as one of the officiary.

No. 2.—Secretary Louis H. Scholl, of New Braunfels, Tex

Louis H. Scholl was born at Hunter, Tex., Oct. 24, 1880, of German parents. Like Langstroth of old, he received no encouragement from his parents, but, in fact, almost every discouragement possible; and the bees which he had accumulated in his minority he purchased to save them from other hands when he attained his majority. This is according to an old German custom, that whatever earnings children may make before becoming of age, belong to the parents. He was told that bee-keeping was no occupation, and that he must take up some trade, but he couldn't see it that way, and so struck out for himself on the bee-line. He was about 21 years of age at this time, leaving home October, 1901, and landing in Southwest Texas, where he made a thorough study of bee-keeping conditions, and at one time was managing apiarist for a company owning 1150 colonies, distributed in several counties.

Taking an ardent interest in association work, Mr. Scholl, in 1899, was elected Secretary-Treasurer of the Texas Bee-Keepers' Association, and held it for a number of years. He has also had experience in experimental apiary work, having had charge of such a department in the Agricultural and Mechanical College, at College Station, Tex. At one time he was sent to Colorado to study bee-keeping conditions there, particularly as to foul brood. He was instrumental in securing the foul brood law for Texas, and in 1903 was appointed Apiarian Assistant in the Department of Entomology at College Station. The work of foul brood inspection throughout the State of Texas fell to him. In 1904 he lectured to 42 audiences, the main topic, of course, being bee-keeping. While at College Station he was elected to fill a position under the German Government, in East Africa, at $3000 per year, but he felt it his duty to refuse the offer in order that he might stay with apiculture, saying that could he have taken Texas and his bees he would have gone.

The fall of 1904 Mr. Scholl attended the Ohio State University, aud remained six months, returning in the spring to look after his apiaries. During his stay at the University he worked on his herbarium of Texas honey-yielding plants, and now has a collection of about 300 specimens, which is considered the best collection of its kind to be found in Texas.

Mr. Scholl resigned his position at College Station Dec. 1, 1905, in order that he might go back to his home in New Braunfels, to enlarge and build up his private bee-business.

June 20, 1906, Mr. Scholl married one of New Braunfels' favorite young ladies, Miss Emma Froelich, who has indeed been a helpmeet to him in every way.

Mr. Scholl now has about 20 apiaries scattered over the country, the nearest being 8 miles, and the farthest 197 miles from New Braunfels. He regards this stretch of territory as important, in that it gives a variety of flora, so that if there is a failure of the honey crop in one locality he may get it from another. In 1907 his honey crop aggregated over 20,000 pounds, or $2000, exclusive of beeswax and vinegar.

As our readers know, Mr. Scholl is a specialist in bulk comb honey production, which is simply comb honey cut from shallow extracting frames and packed in various sized cans; then extracted honey is run in on the comb, which is cut so as to fit snugly on the inside of whatever sized can is used. The proportions are two-thirds comb and one-third extracted honey. From his apiaries in the season of 1909 Mr. Scholl secured between 40,000 and 50,000 pounds of chunk honey.

Mr. Scholl is a prolific writer, and contributes not a little to the various bee-papers. His position as editor of "Southern Beedom," in the American Bee Journal, is too well known to require comment.

With Mr. Scholl's ability and experience in so many directions, it seems to us he ought to make one of the best secretaries the National has ever had. He stands over six feet in height, and if all the other officers expect to measure up to him, some of them will have to do considerable stretching, in more ways than one.

No. 3.—General Manager N. E. France, of Platteville, Wis.

The subject of this sketch was born July 24, 1857, on the wild prairies of Iowa, having Indians as neighbors. In 1862 his parents moved to Platteville, Wis., riding all the distance of 230 miles in the fashionable "automobiles" of the time—a covered wagon and ox-team—with a cow tied behind the wagon.

For some years his father, E. France, had bees in boxes, and by 1857 had succeeded in having all straight combs by the use of melted wax on the underside of the frames without any bottom-bars. Later, Langstroth used a frame of wood on all sides.

In 1865 to 1885 "N. E." went to school fall and winter, and was at home during the summer on a fruit and bee farm. In 1875 he owned his first 6 colonies of bees, which gathered a good honey crop, and in the fall filled the hives with honey-dew for winter stores. The next spring the bees were all dead, but the bee-keeper's hopes were not frosted. He bought more bees and built up another apiary, and by the fall of 1877 had 75 colonies. He heard of a machine to take the honey out of the comb and save the comb. He drove 40 miles, besides going some miles by railroad, to see the first honey-extractor. The whole can and stationary inside fixtures turned. In 1878 he extracted 5120 pounds of honey, and as it was work in those days to take the honey from the combs, it sold for 30 cents per pound, or 5 cents more than comb honey.

Since that time Mr. France has harvested 30,000 to 59,000 pounds of honey in a single season. In each of three years he sold a carload in one sale. For a number of years he has employed students attending the Normal School at Platteville, to help in caring for his several apiaries.

Mr. France has held a number of public positions in bee-keeping, as well as in public schools, etc. He served as secretary for 2 years, and as president for 4 years, of the Southwestern Wisconsin Bee-Keepers' Association; 2 years as secretary, and 8 years as president, of the Wisconsin State Bee-Keepers' Association; for 7 years as general manager of the National Association; and for 13 years as Wisconsin State Inspector of Apiaries. In the last two positions he is still serving.

Mr. France was principal of the same school for 10 years, and for 6 years was a student in the State Normal School located at Platteville. For 4 years he was Deputy United States Mail Carrier, and was superintendent of the bee and honey display at the Chicago Pure Food Show, in which the National Association won the highest award.

There probably is not another man who has done more in a general or public way for bee-keeping than has Mr. France; and he has done it all at much sacrifice, and so unselfishly. The general managership of the National Association means a great deal of work, and for very small pay. But Mr. France has done it all because his big heart was in it.

At the Harrisburg convention of the National, in 1907, a gold watch was presented to Mr. France, and a set of silver spoons to Mrs. France, all of which was only a slight token of the esteem in which Mr. France and his good wife are held by the bee-keepers of America.

No. 4.—Director J. E. Crane, of Middlebury, Vt.

Some 70 years ago there came a little stranger to a farmer in Western Vermont, to which the parents attached the name of J. E. He there watched the snow fall in winter, and saw the crows fly over in summer, and wondered at the fire-flies, and how the night-hawks should fly only at night, and heard in terror the thunder that rolled in the clouds. He went to a "district" school when old enough, and was, perhaps, one of the most stupid in his class, though he remembers once that he did get to the head of the class during one whole term. As he thinks back he can but admire the patience of his teachers in trying to get him to learn the alphabet.

When 12 or 14 years of age his health became very poor, and, indeed, he has never been very well or strong since. When 16 to 20 he became interested in books and wanted to study, but the doctors said he should stay on the farm. So he graduated at the old brown school-house on the hill, and, to make it possible to live on a farm at the age of 26, he tried his hand at bee-keeping.

At 30 he bought a small farm, and moved on it, and with his bees and a wife tried to work out his salvation. It was up-hill business still, and after 10 years he rented his farm, and for the past 30 years has devoted his time to bee-keeping almost wholly.

For many years Mr. Crane kept about 500 colonies of bees, but for the last few years, since his son, P. E. has been in business with him, he has kept more. Their largest honey crop was in 1906, when they shipped of their own some 42,000 pounds to market.

They have marketed their honey, in years back, all the way from Chicago to Liverpool and London, England.

Mr. Crane was instrumental, with some others, in starting a State bee-keepers' association many years ago, that has held its meetings regularly, and many semi-yearly meetings. Of course, he has held all the various offices in this association, and is not without honor from the National Bee-Keepers' Association, as perhaps in 1893, it was when he attended the meeting in Chicago of that year, he found when it came to the election of officers they were running him for president with two others, and as he did not care for the office, and the others seemed very anxious for it, he asked those voting for him to vote for one of the others, which they were kind enough to do. However, they had their revenge, and put Mr. Crane in as vice-president, and the next day, at a short adjourned meeting, he had the pleasure, or honor, of presiding over the National Bee-Keepers' Association.

Mr. Crane has never been much of a politician, but many years ago was elected to the office of County Commissioner, whose duty, under the old prohibitory law, was to license agents to sell spirituous liquors for medical and mechanical purposes, and to look after them. When he came into the office he found the agent in his town was selling $3000 value of liquor a year just for medicine, you know. In two years Mr. Crane succeeded in reducing those sales to $1200, and he also compelled him to label every bottle filled correctly, on a blue label on which was printed in heavy type "*Poison*," with a skull and cross-bones. Of course, he was turned down at the next election, but the man who succeeded him did not dare to let the sales go as before.

When the Prohibition party came along, Mr. Crane found himself unexpectedly in that, and has been nominated to many important offices in that party, and has just as often been defeated at election time; but as he considered it a greater honor to be defeated on that platform than to be elected on any other, he has had a good many honors thrust upon him.

Mr. Crane has preferred to work for the upbuilding of society through church and Sunday-school work than through other channels. He has never found it easy to use a pen and express himself on paper. He did, however, some years ago, write a series of articles for Gleanings, entitled, "Uncle Lisha's Shop," under the *nom de plume* of "Uncle Lisha," in which he tried to show the value of careful breeding of bees, and how other races of animal life had been changed by the efforts of man. It was a great surprise, when some 2 or 3 years ago Gleanings wished him to take up a department. He begged off, but as its publishers seemed much interested in having him do so, he "gave in." He doesn't think it has been much of a success, at least not so much as he expected, or hoped it might be. Perhaps nothing in this line has given Mr. Crane more satisfaction than at a recent centennial celebration of the dedication of his church. He was one of six asked to prepare a paper to be read at that time.

Mr. Crane has many times wished he might give the bee-keeping world something to repay for the many inventions and other helpful things he has received, and by which he has secured such suceess as he has achieved; and he has been wondering in the last year or two if the improved paper shipping-case which he and his son the past season introduced, would not in some measure do so. They have now used these cases for four seasons, with increasing pleasure, and rejoice that those who have adopted them regard them of great value. They have been adopted quite generally in the State of Vermont. Dealers are still willing to give them 5 cents extra per pound for honey in those cases; and dealers who get them seem to prefer them even at extra cost. Mr. Crane believes as soon as their value becomes known they will be very generally adopted.

Mr. Crane has been invited several times, during the past year or two, to speak at bee-keepers' conventions in other States. He was surprised to find himself nominated for director in the National Association, and at first thought he would write and have his name withdrawn, but did not just see how it could very well be done, and so let it stand. It was well that Mr. Crane did not withdraw his name, for bee-keepers need the wisdom and influence of just such men as he in their National councils.

No. 5.—Director E. F. Atwater, of Meridian, Idaho.

Mr. Atwater was born in Decatur, Nebr., and started with a few bees while attending school in Yankton, S. Dak., in 1896. In 1897 or 1898, there appeared in the American Bee Journal a report something like this, as near as he can remember:

"We started the season with 4 colonies, increased to 8, and secured 300 pounds of honey." E. F. ATWATER.

In 1901 Mr Atwater moved to his present location, bought some bees, and for years past has operated from 500 to 700 colonies, last year having increased from 750 to 950 colonies. He has now bought more, so his company now has over 1000 colonies, and hopes to start the season of 1910 with 1200 or more.

No. 6. Director R. A. Morgan, of Vermilion, S. Dak.

Mr. Morgan is 54 years of age, and has been in the bee-business since 1879, when he began in Buffalo County, Wis. He owned and operated 435 colonies there in 1884, and has had more or less bees ever since. He has been in South Dakota for 22 years, and now has 140 colonies, about one-half of which are Caucasians. When Mr. Morgan went to South Dakota there was not a head of clover to be found there, and he has lived to see the Southern part developed into a beautiful clover-producing section.

Mr. Morgan has had considerable experience in making bee and honey displays at fairs, has often been superintendent of such exhibits, and has held various official positions in the South Dakota Bee-Keepers' Association. He was elected Secretary, *pro tem*, of the National convention held at Sioux City last September.

Contributed Articles

Shaking Energy into Bees---Chunk Honey, Etc.

BY G. C. GREINER.

The October (1909) number of the American Bee Journal is so full of interesting bee-matter to think and talk about, that I hardly know where to strike first. Referring to shaking energy into bees, the Editor asks, "Has any one else made it a success?" I jump up and say, Yes, sir; I have.

When the idea of shaking bees for that purpose was first brought out in our bee-papers, undoubtedly it made some of the older bee-keepers smile, and I confess I was one among them. But after considering the matter a little more, and taking an investigating review of the past, I find that I have actually practiced the same thing for many years—not for the sole purpose of shaking, however, but severe shakings were necessary to perform certain operations. To explain just what I mean, I will give a brief review of last summer's management.

When the season of actual work in the apiary opened—about the middle of May—I found that I had from 12 to 15 weak colonies, the rest being medium and strong, about 50 percent of each. The rule I adopted for classifying was something like this: Two to 4 combs of brood—weak; 4 to 6 combs—medium; and 6 to 8—strong. With the exception of one or two examinations to determine their supply of honey, the hives of strong colonies were not opened for spring-management purposes, but the other two classes were manipulated every week, and sometimes at intervals of from 5 to 6 days.

The weak colonies I kept for robbing purposes; I took from one comb, sometimes two of their most mature brood, weekly, giving them full sheets of foundation instead. These combs of mature brood I used to strengthen up the mediums, to prepare them for the coming honey-flow. Of course, all bees on those combs, taken from the weak colonies, were shaken off in front of their respective hives, and by so doing it gave them for about 5 or 6 weeks a continual shaking. The result was surprising. In spite of all this robbing and shaking, these weak colonies grew stronger from day to day, and by the time the white clover flow was in full swing, nearly all of them were in fair shape for the supers. Before the flow was over, they stored quite a little surplus honey—the weaker ones extracted, and the better ones comb honey.

In building up the "mediums," it was almost the same affair in regard to shaking. To make room for the combs of brood taken from the weak colonies, I took out such combs (generally side combs), that were the least desirable for brood-rearing. Here, too, the shaking process had to be resorted to, for all combs thus removed were more or less covered with bees, and had to be shaken off. I hardly need to say, that these colonies grew rapidly stronger, and were ready for the harvest when the flow began.

And did the remaining "strong" colonies have any shakings? Not for the purpose of shaking energy into them—they were doing their level best

THE GOLDEN APIARY
P.R.HOBBLE-PRES.
DODGE CITY KANS U.S.A.
The ALFALFA APIARY
BEE & HONEY EXHIBIT

No. 1.—General View Showing Entire Apiarian Display at the Oklahoma State Fair.

without it. Nevertheless, they were severely dealt with. After the flow had nicely started, honey came so fast that I could hardly supply them with empty combs fast enough. For various reasons best known to myself, and not intended to be discussed in this article, I practice taking out full combs when necessary and replace by empty ones during the extracting season. Whenever this work is being done, all supers are generally crowded and combs completely covered with bees. According to the condition of the super, from 3 to 5 combs are exchanged at each operation, and, of course, that many combs have to be shaken off, or brushed off, every time.

It happened that the honey-flow was so profuse this season that I had to make the rounds every 3 or 4 days, making an almost continual shaking compulsory, and, it seemed, the more I shook the more honey they stored. Now, if Mr. Getaz failed to notice any beneficial results from shaking, it may be he did not shake in the right way.

Chunk or Bulk Comb Honey.

Then comes Mr. Scholl with his chunk-honey introductory. This opens up a long discussion—too long for this article, if indulged in, but a few brief comments may be admissible.

If the people in his locality are educated that way, and call for chunk honey, by all means produce it. It is by catering to the demand that we succeed in making sales. It is an unprofitable job to sell, or try to sell, what people don't want to buy; and it is the easiest thing in the world to dispose of anything they are looking for.

Some years ago, before I had my present trade established, a party used to call at my home and bought all the unfinished honey I would sell, paying me the same price per pound as I asked for my finished sections. In a roundabout way I found out that he manufactured a sort of honey syrup, cutting up my unfinished honey and mixing it with I-don't-know-what, which he peddled from house to house, and sold by the pound. I cannot say whether he offered his mixture as honey-syrup or honey, but from the innumerable expressions of his former customers, I should judge that he called it "honey."

When I first began to be known as a producer of honey at our city market, which I visit late years regularly once a week, people came to my wagon and expressed themselves something like this: "Some years ago a man used to call at our house and sold honey by the pound; he dipped it out of a crock, and we had to furnish a dish to put it in. He called it honey. It looked like honey, and tasted some like honey, but it was not like *your* honey. He doesn't call any more since you come to the market. We want *pure* honey, and we know what we bought of you before was fine."

This is a sample of the stories I heard, time and again, during the first years I visited our city market, and even now, after the reputation of my honey has become an established fact, I hear the same thing occasionally.

There is one serious objection to Mr. Scholl's chunk-honey management—he offers a helping hand to this nefarious business of adulteration. Not that I mean to say Mr. S. himself would be guilty of doing any mixing, but after his honey has left his hands, what is to hinder a dishonest dealer (and there are lots of them) to turn in a lot of glucose and sell it all as pure honey? How long would it be before consumers would find out the difference and refuse to buy chunk honey, saying, as some of my customers did, "We want pure honey." The chunk-honey idea will eventually become a sad setback on our honey-trade. This is my impression.

But why does Mr. Scholl so persistently advocate the production of chunk honey, enumerating the various advantages connected therewith, when the production of extracted honey would give him all those advantages and others besides? Put up in clean, labeled glass cans, it presents a neat appearance, which Mr. S. cannot say of his chunk honey. We are always urged and instructed to make honey displays at fairs, conventions, etc., for the furtherance of the honey demand; given frequently photographs of elaborate displays of prominent bee-keepers. Could Mr. S. rig up anything of that kind with his products?

The people here in the East are so used to seeing all our commodities put up in neat, attractive form, that they would rather pay a little more and have things to suit their fancy. If they want comb honey it cannot be disputed that a nice, white flake of section honey on a tasty desert dish presents a much more attractive, appetizing part of the table outfit than chunk honey in any form it can be served. There is only one class of people in this part of the world who would buy chunk honey, providing they could buy it for less money, and that is the laboring class of foreigners. The American laborer, as a rule, prefers his table-supplies just as neat, tasty, and up-to-date in every respect, as his employer.

More could be said on this subject, but the wise will take the hint.

La Salle, N. Y.

Apiarian Displays at the Oklahoma State Fair

BY J. C. FRANK.

The Oklahoma State Fair, held Sept. 29 to Oct. 8, 1909, at Oklahoma City, Okla., was a grand success. It was, of course, the sweetest and best exhibit on the grounds, and attracted considerable attention. It also proved very interesting to the thousands of people that visited the Apiarian Department.

The exhibitors were as follows: F. W. Van De Mark, of Stillwater; B. F. Bartholomew, of Norman; Geary & Geary, of Noble; Geo. H. Coulson, of Cherokee; Mrs. J. T. Wallace, of Oklahoma City; and The Golden Apiary of Dodge City, Kans.

Picture No. 1 is a general view, showing the arrangement of the entire display, consisting of bees, honey, beeswax, bee-keepers' supplies, and all other products of the apiary.

No. 2 is a view of B. F. Bartholomew's exhibit, showing the arrangement of bulk-comb designs in honey and beeswax. Also Mr. B. in the foreground; but the writer knew of no special premium being awarded to him for an exhibit of that kind!

No. 3 shows the exhibit of F. W. Van De Mark's, who was away eating ice-cream cones at the time this picture was taken.

No. 4 represents "The Alfalfa Apiary," with G. H. Coulson, the proprietor in the foreground. Mr. C. was the bee-man at the fair, talking bees to all the visitors.

No. 5 is a view of "The Golden Apiary," with the writer, who is manager, in the foreground. This was a part of the display from the Kansas State Fair, where it carried off nearly all the first premiums; the rest of this display was lost on the A. T. & S. F. railroad.

No. 6 is a general view of the Agricultural Building, where the apiarian displays were located.

The awards were made as given below by Prof. Wright, of Stillwater, Okla.:

Bulk comb honey in glass—1st, B. F. Bartholomew; 2d, F. W. Van De Mark; 3d, Geary & Geary.

Section honey, not less than 5 cases of 15 pounds each—1st, The Golden Apiary; 2d, Geary & Geary; 3d, B. F. Bartholomew.

Case of white honey from native flowers—1st, The Golden Apiary; 2d, B. F. Bartholomew; 3d, F. W. Van De Mark.

Case of amber honey from native flowers—1st, Geary & Geary; 2d, B. F. Bartholomew; 3d, F. W. Van De Mark.

Extracted honey—1st, The Golden Apiary; 2d, B. F, Bartholomew; 3d, Geary & Geary.

Samples of extracted honey in not less than one-pound bottles—1st, F. W. Van De Mark; 2d, Geary & Geary; 3d, B. F. Bartholomew.

Candied extracted honey—1st, Geary & Geary; 2d, B. F. Bartholomew; 3d, F. W. Van De Mark.

Samples of candied honey from different flowers—1st, Geary & Geary; 2d, F. W. Van De Mark.

Beeswax—1st, The Golden Apiary; 2d, B. F. Bartholomew; 3d, F. W. Van De Mark.

Designs in honey—1st, B. F. Bartholomew; 2d, The Golden Apiary; 3d, Geo. H. Coulson.

Designs in beeswax—1st, B. F. Bartholomew; 2d, F. W. Van De Mark; 3d, The Golden Apiary.

Sealed comb for table use—1st, F. W. Van De Mark; 2d, B. F. Bartholomew; 3d, Geary & Geary.

Sealed comb for extracting—1st, Geary & Geary; 2d, B. F. Bartholomew; 3d, The Golden Apiary.

Apiarian appliances—1st, F. W. Van De Mark; 2d, The Golden Apiary.

One frame of dark Italian bees in observatory hive, and queen—1st, Geary & Geary; 2d, Mrs. J. T. Wallace; 3d, Geo. H. Coulson.

One frame of golden Italian bees in observatory hive, and queen—1st, Geo. H. Coulson; 2d, F. W. Van De Mark.

One frame of black or native bees in observatory hive, and queen—1st, Mrs. J. T. Wallace; 2d, F. W. Van De Mark; 3d, Geo. H. Coulson.

Separators in Section Honey?

BY G. M. DOOLITTLE.

"Mr. Doolittle, won't you give us an article in the American Bee Journal relative to the use of separators in the production of comb honey for market? Shall we use them, or shall we not?"

Thus writes a correspondent who evidently is anxious, as all should be, to place their section honey on the markets of the United States in *the most marketable shape.*

In replying, I wish to say that the answer to this question depends quite a little upon what would be the answer received were the question, "What are the markets of the United States?" put to our correspondent or the readers of the American Bee Journal. To the one who would answer this question by saying, "I sell *all* of my section honey in the local or home market," my reply would be, that it mattered very little whether separators were used or not, for, in such a case, any person having a fair, average ability as an apiarist, could succeed without separators in producing section honey that would please, as in the home market, absolute regularity or straightness of combs is not necessary. While having the nice white capped sides of comb honey all straight and even as a board, is pleasing to the eye of prospective customers whether in the local market or otherwise, yet where honey is not cased, this pleasing-to-the-eye part would not be of sufficient value, in my opinion, to pay any one who had a quantity of supers and fixtures adapted to the production of section honey without separators, in casting them aside that they might adopt a system requiring the use of separators.

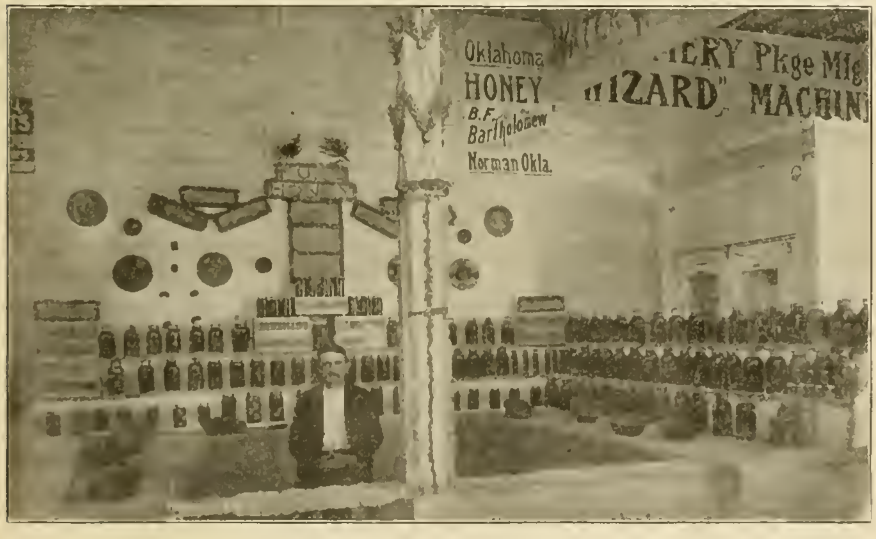
But, supposing the answer to the question, "What are the markets of the United States?" proves to be "a village or distant city market," or one which requires the casing of our product. And this is the answer any apiarist who in any way believes that in time he may become a specialist in the bee-keeping branch of agriculture, is sure to give sooner or later. With such an answer, a radical change from the non-separatored plan is sure to come, for the reason that not one in ten of the section-honey producers of the United States have an average ability of high order enough to produce section honey that can be promiscuously cased, without there being more or less sections, the combs in which are so wavy or bulging that when placed in the case, some parts of their sealed surface will come in contact with their fellow sections, this causing the honey to leak and run down into the bottom of the case, if not through the case. Thus, on the arrival of such honey to the village or city to which it was shipped, it is in almost any other than a marketable shape. After one or two such experiences, any bee-keeper who has an "eye" to his calling, concludes that he has sufficient reasons for casting aside all of his supers that will not allow of separators being used, and going to the expense of providing himself with suitable material so that the comb honey in no section used shall be built otherwise than between separators.

So far I have been considering the matter from the standpoint of the one who has from 20 to 500 colonies with hives and fixtures therefor, on the plan of non-separatored section honey. But allow me to say further, any one beginning in apiculture cannot make any mistake if he starts out with fixtures adapted to the production of comb honey with separators, as such honey is equally as salable in the local or home market, as it is in any spot or place in the world, say nothing about the *United States.* The production of unseparatored honey in marketable shape requires some things over which the apiarist has no absolute control.

Suppose the honey-flow is on and the bees have commenced to work in all parts of the super (as they must if we are to have reasonably decent combs in the sections for market), and at the end of these two days after starting, cool to cold weather comes on, the bees draw in the cluster until it may not occupy more than half of the super, when, if such weather holds on for 3 or 4 days, as is often the case, those sections clustered upon will become "fat," while those outside will be "lean." The weather now turns warm and then hot, so that the cluster again takes in all the sections in the super, or at first, when we have of necessity the fat ones with their cells lengthened out into the lean ones along the edges, where the bees left off clustering during the cool spell till these fat ones are nearly, if not quite, twice as thick as to combs of honey as are the others. This will entirely exclude them from being cased in any way, except by taking their places in the case in the identical position they occupied in the super, which it is not possible for them to do unless the super and the shipping-case are of equal dimensions in every way.

Then, to have anything like satisfactory results with unseparatored supers, all colonies supered must be strong enough to enter and fill any one super at once; otherwise we have the same state of affairs as in the before-mentioned case, for should there be only bees enough to start work vigorously in the center of the super, each section, as we go farther and farther toward the outside of the super, will have one fat side and one lean side, this becoming more and more prominent as the sides, each way, are drawn the nearer to.

Again, there must be almost a "downpour" of nectar to secure good results, and that continued till the whole of the super is finished. With a light or an intermittent flow, many of the sections will be capped down a part of the way, and, on a "spurt" of honey coming, the uncapped cells just below will be lengthened out, some projecting into their neighbor sections, this way and that, until the "faces" of the combs will have become so uneven that casing them will be entirely out of the question.



No. 2.—Exhibit of B. F. Bartholomew at the Oklahoma State Fair.—See page 42.

F.W.
VANDEMARK
for A. I. Root.
BEE SUPPLIES.
ROOTS
SUPPLIES

No. 3.—Exhibit of F. W. Van De Mark at the Oklahoma State Fair.—See page 42.

Then, if we wish to use "bait"-sections to start the bees to work in the supers, just as early in the season as possible, the profitableness of which is conceded by nearly every practical apiarist in the world—if done without separators, these baits will have their cells lengthened out before capping is commenced, so that they will bulge nearly into the center of those on either side.

If I am correct, this whole idea of producing section honey without separators originated with the idea that bees will store more honey in a super without separators than they will store in the same super with separators. But just how much more I have never heard any one attempt to say. I used to think just that way myself, but after 30 years of close watching, and trying the two plans side by side, *I* cannot tell how much more; but, my candid opinion is, that there might possibly be this difference; only 499 pounds being stored *with* the use of separators as against 500 pounds where separators *were not* used.

Borodino, N. Y.

Treating Bee-Fever—Chunk Honey

BY HARRY LATHROP.

If I were so minded I might advertise to sell a secret for one dollar, "How to cure the bee-fever." I would be compelled to state, though, that the cure would not be permanent in all cases, and could not be applied at all seasons. As I do not sell secrets, I will give the cure here. It is this:

Hard work in a bee-yard in hot weather, with more work than you can get through with, and many stings, the latter being especially good; and the hotter the weather the quicker the fever will abate.

For myself, I have a recurrence of the disease every winter, and no cure for it until the season arrives when I can procure the above presciption.

I do not have time during the summer to read the bee-papers carefully, but in winter I get them out and read everything in them, whether I had previously read it or not. Then the fever rages, and I honestly believe I can keep as many bees on paper, or in my mind, as any living man.

Out of this fever usually grows some plans for the coming honey season. Just now I am greatly interested in the subject of bulk-comb or chunk honey. I never liked the pound-section way of producing honey, but feared that if we tried the Texas method of chunk honey, there would be too much granulated bulk honey, which would be a hard matter to handle. I now think that by keeping the honey in the frames in a suitable place as long as possible, then pack in receptacles, using extracted honey that had previously been treated by slow heat in a sun extractor or otherwise, we might obviate the difficulty of granulation.

Then there is the possibility of marketing comb honey neatly wrapped in paraffin paper, a certain weight to each package. It seems to me that such a method might become popular. Anyway, bee-keepers do not want the basswoods cut up into section wood, and consumers do not want to pay for this wood when they buy honey. The greatest items, however, are the saving of labor, and the increase in production.

The only trouble may be that some producers will sell this honey at the price of extracted. In that case there would be no advantage in it.

I am pleased that we are to have a series of articles on chunk honey production, in the "Old Reliable." But let us of the North try it next summer, and the experience gained, if given at the close of the season, will make good reading.

Bridgeport, Wis.

Shaking Energy into Bees

BY C. P. DADANT.

When something new is discovered, whether in the bee-business or in other lines, many enthusiasts are apt to overestimate the improvement, while others discourage it beyond reason. The idea of shaking the bees out of their hive to give them more energy has been engrossed upon by the usual number of enthusiasts, and has been ridiculed by many others. I have been quoted as being in favor of this method; that is why I desire to discuss the pro and con.

It has been stated emphatically that a natural swarm works with more energy after being hived than its bees worked in their former abode, and this has been laid to some mysterious influence of the disturbance. The opposition, on the other hand, has explained that a new swarm, not having any brood to care for during the first few days in its existence, is in the best of conditions for amassing stores. To this might be added the statement that all the bees in a swarm, by the fact of their emigration, have become active workers. Those who are in the habit of watching swarms emerge from the hive have noticed that only such bees as are too young and too weak to fly remain in the hive, that many of the just-hatched bees nevertheless crawl out, carried by the whirl, only to fall helpless in front of the alighting-board, returning with great difficulty. Many of the more mature young bees, were it not for this pell-mell exit, would have remained a week or more within the walls of their home. Swarming evidently hastens their maturity. It is a case of necessity. Many of them, of course, will remain at home in the new abode for a few days, if their labor is needed inside, to build comb or nurse the young. So the working force of a swarm is greater than that of the old colony ever was, but this increase of ability is at the expense of the old colony, and the more thorough the exit has been the weaker the old colony has become, though it is usually somewhat replenished from the bees that were out foraging at the hour of the swarm issue.

The activity of the new swarm is also enhanced by the much greater amount of room which they find to be filled, especially if all, or a good proportion, of the combs have been furnished to them. However, in this case, breeding is more rapid, and the expenditure and time required to take care of the brood reduces the apparent activity that much.

The shaking process applied to the bees of a colony in working order has a somewhat similar influence on the young bees. Many that would have remained quiet for a week or more are thus compelled unceremoniously to take a flight. That it causes the young bees to start out earlier in life for the harvest field may very readily be proven if we Italianize a colony of common bees. The change of queens causing a change in the color of the hatching bees within 21 or 22 days, it becomes quite easy to see whether we can hasten the flying out of the young bees by positive disturbances. This is a very good reason for an increase of energy in the colony, if the weather is favorable to their flight and the presence of the young bees is not positively needed indoors to build combs or keep the brood warm.

In the breeding season there is another result secured by the disturbing of the hive from time to time. This result, however, is conditional upon the quantity of honey which they may have in store. In an observation hive one will often notice that if any loaded bee passes by the queen, she will offer the queen honey. To lay thousands of eggs each day, the queen must eat a great deal—in fact, she must eat at all hours. When there is no crop, the offer of food to her by the bees is less frequent than when the crop is on. If we disturb the colony, the bees will fill themselves with honey from their stores. They do this whenever they are frightened from any cause. Naturally, before those stores are returned to the cells, many bees meet the queen and the offers of honey to her are more frequent than if the colony had remained quiet, especially if there is no honey in the fields. An increase of food for her means an increase of laying, and sooner or later an increase—an unusual increase—in the strength of the colony. The oftener this is repeated the more honey is consumed, but the greater the laying. This would, of course, do no good if the crop was already on; and if the crop was not to be over 4 weeks' duration, the increase of laying would mean the production of workers too late for the harvest, since it takes nearly a month to make a field-worker from the fresh-laid egg.

The two above-named reasons are to me very plain expositions of the cause of an increase of efficiency in colonies that are disturbed during the breeding season preparatory to the honey crop. There would be no increase and no benefits if the colonies in the case were short of stores. This is very evident.

Now, is there an apparent increase of efficiency in colonies that have simply been transported to our new pastures? Some persons will say that there is no such increase. But I have often noticed it, and so have others, among whom I will name my brother-in-law, E. J. Baxter, of Nauvoo, Ill., who has had oft-repeated experiences in transporting large apiaries.

The disturbance will, of course, cause an increase of consumption of honey and an active feeding of the queen, but this will be of very short duration, and in return there is more or less loss of laying, for she cannot well busy herself at her duties while the colony is being shaken about. One will certainly offset the other. We must look elsewhere.

I believe the increase of efficiency from moved colonies is due to their having to learn a new location. In normal conditions each bee at its first flight turns and carefully examines the location before venturing in the fields. It does not learn the entire vicinity in one day, surely. Not long ago a French scientist ventured the assertion that bees could find their way home with their eyes bandaged, from any point of the compass. But he limits their range to two or three kilometers—less than two miles. I believe that they learn to find their way in the fields very much as we would find ours if we were provided with wings, by the configuration of the locality. Bees that have been brought to a new spot have to learn their location all over, every one of them, young or old. As soon as they find that they are in a new field, it seems reasonable to believe that they are eager to become acquainted with the range. Hence more active flight, more positive returns, than in the case of the bees which have been reared within this field of action, and find no change from day to day.

Many different opinions have been advanced as to the range of a bee in all directions. It is evident, from the testimonials given in this country as well as in Europe, that there is quite a difference in the distances according to the direction, the winds, the hills, the blossoms. But an old bee in a new field (new to her) will very probably develop an enthusiasm that she would not have experienced in a long-beaten track.

It seems to me that the above exposition of probabilities and deductions is sufficient to indicate that disturbances and transportation of bees can have only a limited influence on the success of the colony, and that we must not put too much stress on the benefit to be derived from such abnormal operations. In many cases disturbance and transportation of bees will do more harm than good.

Hamilton, Ill.

APIARY
TONS OF HONEY GOES TO WASTE FOR WANT OF BEES TO GATHER IT.
THERE IS MONEY IN BEES AS WE
HONEY.

No. 4.—Exhibit of Geo. H. Coulson's Alfalfa Apiary at the Oklahoma State Fair. See page 42.

2.---Bee-Talks for Beginners

BY JIMSON RAGWEED, OF INDIANA.

Molding Beeswax into Cakes.

Dear Cousin Jimson:—While attending the reunion I went through your shed and examined your bee-fixtures, and I saw some beeswax molded into cakes of about 3 pounds each, and free from dirt. How do you do it? Our drug and wall paper man says he will take all of my wax if I will mold it in cakes. I poured a lot of melted wax in Martha's cake-pans, but now we can't get the wax out, and it seems full of specks. Should I grease the pans with tallow, and should I strain the wax? We had intended going up to The Crossing this week, but Baby Sid is threatened with a cold, and Martha thinks best to wait till the weather gets better.

Your Cousin, Cyrus Ragweed.

Cousin Cyrus:—I am very glad you mentioned about the beeswax. Several little secrets in this line have been imparted to me, and I will try to explain. Do not grease your pans, and do not try to strain your wax through a cloth. In melting your wax use a double-boiler; that is, one pail placed in a larger one with water in the larger pail. This prevents overheating, which is injurious to wax, and it also overcomes the danger of having the wax boil over on the stove. Most impurities will settle to the bottom, but if some particles float they should be skimmed off while the wax is fluid. Now, do not attempt to pour in molds till the wax shows a congealed ring around the edge, and it will then be just right to pour, and when cool the cakes will drop from the molds by simply inverting. If molds are filled while the wax is too hot, the wax will cling to the molds after cooling. Wax could be improved still further if longer time could be given in the cooling process before pouring. These directions are not difficult to follow, and by using care one can realize a better price for his wax.

Thursea says to tell Martha that if she will apply goose-grease to Sid's chest and nostrils at night, he will be better by morning.

Your Cousin, Jimson Ragweed.

Getting Straight Brood-Combs.

Dear Uncle Jimson:—When we were at the reunion pa and Cyrus went through your shed looking at your bee-fixtures, and pa says he never saw such nice, straight brood-combs, free from drone-comb and no wire or splints used. Pa spoils so many nice new combs in extracting, and he wants me to write and ask how you manage.

Ma is going to send you a crock of our punkin butter by express.

Give our love to Aunt Thursea, to Sam and the twins. Write soon.

Stella Ragweed.

Dear Niece:—A great many good bee-men wire their frames, and others use splints, but for myself I find that I get more superior combs by using full sheets of medium-brood foundation without wire or splints. In extracting I use regular brood-frames in the second story, with a queen-excluding board, and I try to foretell how many combs I will require. In getting new combs drawn out I always place them about the center of the brood-chamber, exchanging for the same number of combs which I place in the upper story. I want to be sure that an equal force of bees work on both sides of the foundation at once, and if my hive is level, the combs will be straight. After being used for brood one season they are then sufficiently strong to be used for extracting. I would not attempt to extract from a newly built comb.

Your Uncle. Jimson Ragweed.

Shaking Bees for Work.

Dear Pa:—There are several good bee-men here, and of one them wants me to write and ask you about shaking bees. He says he cut out that article that you wrote for a farm paper on the subject some years ago, and he has lost the clipping, but he still has the paper.

Pa, when you write again I wish you would slip another 10-dollar bill in your letter. This is an awful good business college, but I must have a new tablet and some linen col

GOLDEN APIARY.
BEE AND HO
DODGE CITY KANS U.S.A.
J.G.FRANK-MANG'R.
KEEPERS SUPPLIES.
APIARY

No 5.—Exhibit of The Golden Apiary (J. C. Frank, Mgr.) at the Oklahoma State Fair.—See page 42.

lars, for it seems that I am about the only one in Vincennes who is wearing celluloid collars.

They tell me that at the option election this county voted so wet that some of the people are actually getting to be web-footed.

My love to ma, and to Steve and Eva.

Your son, Samuel Ragweed.

Dear Sammy;—Tell your friend to go slow about shaking bees. In a good season excellent results can be obtained, while in a poor season the more they are "shook" the poorer the results. Those who undertake it should be thoroughly familiar with all details, and your friend could profit by reading the excellent articles that appear in the bee-publications from time to time.

Perhaps the most practical method of shaking is where one produces both comb and extracted honey, and permits swarming with his comb-honey colonies. When a swarm issues, hive it on the old location, using starters only in brood-frames, a queen-excluding honey-board, and the super from the parent hive, and then brush every bee in with the new swarm. The set of combs containing brood should then be placed over a honey-board on another hive for extracting. This method is thoroughly practical, and permits swarming without increase. Such newly-hived swarms will give better results than any normal hive in the same yard, for obvious reasons—storing goes right ahead in the super, no brood requiring the attention of workers, no danger of second swarms.

Sammy, I enclose two 5-dollar bills, and your ma says to ask you if linen collars are not pretty high in Vincennes.

Jimson Ragweed.

Its Quality Sells Honey.

Dear Brother-in-Law;—Knowing that you dispose of your honey by soliciting from house to house, I would like to ask what the tricks are in doing this kind of work. I will solicit French Lick and West Baden, and it will be necessary to go over the same territory about every 3 weeks.

I want to come over and visit with you a week or two about the first of the month, just to talk bees, and I want to go to Marengo, Ill., for a couple of weeks for the same purpose. Let me hear from you.

Winfield S. Fesler.

Sir:—There are no *tricks* in the work which you outline, but there is one secret, and I will confide it to you. *Keep up the quality.* I think most honey salesmen fail because they try to increase their profits by putting out inferior goods.

Thursea and I are to be away from home during the forepart of the month.

Jimson Ragweed.

(To be continued.)

* * *

Shaking Not a Stimulus to Bees

BY LEO E. GATELEY.

Without questioning the accuracy and good intent of the many recent reports seeming to show where beneficial results emanated from shaking sleepy colonies of bees, I wish merely to draw attention to a prevailing error many are spreading through an erroneous belief in some mysterious cause, while all such benefits really spring from conditions brought about during such manipulations. Let us lay aside preconceived notions, tradition, and prejudice, and examine this subject with a desire to know the truth.

From the start the mistake in concluding that benefit can be derived purely through the act of dislodging bees from their combs into a pile in front of the hives, is obvious by the claim that such proceedings bring colonies into the same psychological condition characterizing newly-hived swarms. While newly-hived swarms do generally display a degree of energy impossible to be secured from old colonies, it has been conclusively shown that such energy is not the result of having swarmed, or the handling received through hiving, but wholly from certain conditions under which the bees labor in their new environments. The underlying cause, generally, will be found to lie principally in the broodless condition of such swarms, permitting a greater force of bees to engage in nectar gathering. Also, the honey old colonies are compelled to use for breeding purposes, newly-hived swarms store in the supers. That increased energy never arises simply through the act of swarming is manifest from the equally great energy displayed by brushed swarms. Such energy, then, is not the result of mental conditions, but of surrounding circumstances and influences.

Colonies during a good flow, that refuse to do super-work for reasons apparent only to themselves, can be often led into so doing by arranging more favorable conditions under which bees are naturally inclined to do such work—never through shaking alone. Good colonies that will ignore the surplus receptacles while others are busy in the sections, are occasionally of inferior stock, but are more often laboring under adverse circumstances. While shaking may correct the unfavorable conditions through breaking up and disarranging the order of things, whatever the cause may be, it is the bee-master's business to locate the trouble, and remedy it effectually and intelligently. Certainly the mere manipulation of shaking bees on the grass and of shaking the bees out of their hive to causing them to crawl back into their hives is of absolutely no value, unless connected with a change of hive or of combs. Though it would be illogical and inconsistent to anticipate beneficial results from indiscriminate shaking, intelligent manipulation is imperative and indispensable to successful honey-production.

With sectional hives the purpose of shaking can, by the transposing of brood-sections, be accomplished scientifically in 5 minutes time. To create increased activity it is necessary only to interchange the two divisions of the brood-chamber. This operation practiced at the time of supering will cause the bees to begin work in the sections without delay.

Sebastian Co., Ark.

* * *

Are Bees "Wild" Animals?

Translated from the Bohemian in the "Vcela Moravska."

BY REV. ALOIS J. KLEIN, V. G.

In the village of Nemcice, near Netolice, in Bohemia, the principal teacher, Mr. Francis Jaros, an acknowledged authority in matters apicultural, keeps 16 colonies of bees in the school-garden, chiefly for educational purposes.

One day he was accosted by Mr. Schuster, the chairman of the village board, to present him with one of the hives. The principal having declined, the chairman issued a restraining order, enjoining the teacher from keeping bees within the limits of the village.

The captain of the political district overruled the prohibitory order, because, being unconstitutional, and in abeyance with certain school laws prescribing explicitly that school yards be, as far as possible, provided with hives as expedients of instruction.

This decision was upheld by all instances.

The chairman then resorted to some other mode of wreaking his anger upon the principal.

On an August forenoon, when bees were busily flying to the fields, he sent his son to plow the ground adjoining the school yard. As soon as the plowman got stung by a bee, a neighbor was sent for, and both men stationed themselves close to the fence on the divide, in order to be able to give optical testimony that the flying bees were coming exclusively from there, and from nowhere else. It so happened that the neighbor, too, received a sting, and the village chairman indicted the case to the county court in Netolice.

The county attorney, however, did not feel in the least inclined to institute proceedings in such an odd complaint, and hence conferred with the State's attorney at Pisek.

By order of a deputy State's attorney, Mr. Sebanek, action was brought against the principal, charging him with the alleged violation of article 388 of the Penal Code (keeping "wild" animals without the governmental license), and with violating article 388 of the Penal Code (failing to render the said "wild" animals innocuous though cognizant of their dangerous habits).

The judge of the first instance handed down a decision of exoneration, upon the ground that bees must be considered domestic (tame) animals, and that there does not exist an arrangement by which bees could be rendered harmless so far as to prevent them from making use of their stings, when irritated. Neither can they be kept in an enclosed space, since their economical importance of honey-gathering would then be nullified.

Impelled by orders from higher places, the prosecutor of the State announced an appeal, and the gendarmes was assigned to investigate, whether the school-master's bees are vicions, and whether or not the chairman's field, adjacent to the school-garden, is really threatened to such an extent as to render all the field-work thereon next to impossible. In Austria anything may happen, and the gendarmes furnished evidence that the field-work is actually endangered. And this, too, was ascertained by them in the winter time!

Consequently this peculiar case was up before the circuit court at Pisek.

The Bohemian National Bee-Keepers' Association, of which the principal was a member, furnished the defendant with a legal counselor in the person of Dr. Zmek, who, before the court of appeals, eloquently emphasized the importance of apiculture along the lines of national economy, besides setting forth its pedagogical value, and in his closing appealed to the still valid Patent of Empress Maria Teresa, in which the highest disfavor is put on those who would dare to commit an infraction against keepers of bees; remarking further, that it would be impossible to tie bees with a thread on their legs, or to provide them with a muzzle, he petitioned the court to affirm the verdict of the first instance.

The deputy State's attorney, Mr. Sebanek, contended in his lengthy plea, that the present case actually involves offences against both articles of law, and requested judgment against the defendant.

The Senate of Appeals sustained the ruling of acquital, of the lower court, basing its opinion on the Patent of Maria Teresa, already quoted, the validity of which was thus confirmed.

Brainard, Nebr.

Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ont.

Disposing of Comb and Honey in Foul Brood Treatment

A. R. Summers, of Missouri, asks as to what is done with the combs and honey put into the vat of boiling water as described in the McEwen treatment for foul brood in the December American Bee Journal. They are, of course, rendered into wax at once, and that is one of the main things in any of the different treatments of foul brood that is really necessary—getting the source of reinfection out of the way in a thorough manner. One of the most difficult things the inspectors meet with in their rounds is in seeing that all these old combs are out of the reach of the bees after other instructions have been faithfully obeyed. The matter of rendering the combs into wax is often put off till "a more convenient season," and they will be placed in some shed or other building where it is taken for granted that the bees will not find them. Judging from many experiences, some men seem to think that any place that will exclude a woodchuck, will also be proof against bees getting in, and, as a result, often the work done previously is rendered abortive because of gross carelessness in allowing the bees to gain access to these combs of honey.

Time and time again have I come to a place where the bees have been shaken from the old combs, and on asking if the latter were burnt or put into wax the answer would be, "No, but they are away from the bees." Insisting on seeing where they had been placed, sometimes we would be taken to a building and find the combs of honey, etc., loosely stacked up, and many openings in the sides of the building that the bees could come through at will. The owners would express surprise that I thought the bees would ever come in such roundabout places, and really thought that I was a bit unreasonable in insisting that the combs be moved into a cellar or other secure place at once. Of course, it is only fair to say that this would be with men who kept but few bees, and gave them little care, at that, as any experienced bee-keepers soon learn that even when every possible crack is closed, in so far as can be seen, often after all our precaution we will find bees gaining an entrance in some out-of-the-way place that has been overlooked.

OKLA CITY'S
PARK DEPT
WHEELER PARK

No. 6.—General View of the Agricultural Building of the Oklahoma State Fair, Where the Apiarian Department Was Located.—See page 42.

Sealed Stores for Spring Feed

There is some difference of opinion as to the quantity of honey a colony of bees should have in the spring in order to build up successfully.

The late E. W. Alexander stated that he would prefer to have the brood-chamber nearly empty when the first fresh honey came in, while many good bee-keepers think that it is a sign of prosperity if there are several combs of sealed stores in the hives when brood-rearing commences.

There is no doubt that this capped honey helps out in feeding the brood, but its presence in the hives at this time is a serious detriment to the growth of the colony. I have frequently seen a good queen greatly hampered in her egg-laying by the presence of capped honey at the tops of the frames and in the frames at the outside of the hive, and it is quite possible to have the frames in the hives so filled with honey in the spring that there is no chance of a colony getting in good shape for the harvest.

This condition is often brought about by a late fall flow, or by heavy feeding to a colony on its full set of brood-combs.

Any ordinary colony will winter well on 6 Langstroth combs, well filled with honey or sugar syrup, and by contracting down to this number and filling them up well, the honey or syrup is in the best shape possible to be used by the bees.

When brood-rearing is well advanced in the spring the empty spaces can be filled out with empty combs, and the queen given a better chance to go ahead with her egg laying.

I would much prefer empty combs on the outside of the brood-nest in the spring with a good feeder on the hive, to several solid slabs of honey in the brood-nest.

Bees will not use up sealed stores for brood-rearing to any extent, and the presence of this surplus honey in the hives is no indication of prosperity. It is rather the reverse.

The finest combs of brood that I ever saw were in empty frames given to fill out. In them the queen could lay unhampered by honey, and they were filled right out with brood all nearly of the same age. Such a condition is not possible in combs that are partly filled with honey when the queen commences to lay in them.

Few people realize how a good, strong colony of bees will boom ahead under the stimulus of regular feeding in the spring, and at this time sugar syrup regularly fed is of ten times the value of capped honey to the bees. F. P. ADAMS, in the *Canadian Bee Journal.*

Mr. Adams is one of our most successful bee-keepers, and also a queen-breeder on a large scale, hence anything from his pen is always worth our serious consideration,

What he says in the foregoing is, I believe, entirely correct in so far as the handling of pure Italians is concerned, but when Carniolans and their crosses are taken into consideration a lot of modification is necessary, of some of the statements made.

With me, the major part of my bees have Carniolan blood, and although the past few years have seen the large hives literally jammed with stores, yet so far the full combs have not bothered me any in the spring. Mr. Adams says:

> "Bees will not use up sealed stores for brood-rearing to any extent, and the presence of this surplus honey in the hives is no indication of prosperity. It is rather the reverse."

Quite possibly so with the Italians, but pretty sure to be just the reverse with Carniolans. The past 3 springs have been classed as unfavorable for brood-rearing, judging from many reports to that effect, but in my own yards my experience has been that just such springs are the very best for Carniolans. Granted a big hive with abundance of stores early in the spring, even if the bees get only an occasional flight during weeks of bad weather, the result will be, every time, that all these sealed combs will be converted into bees, and the colonies will be boiling over with bees by fruit-bloom.

Before me I have a letter, sent me in the spring of 1908 from Mr. McEvoy, in reply to one I had sent him earlier, in which I stated that my bees were so heavy in stores after wintering that I did not know what to do to get rid of all the buckwheat in the hives before the clover flow came on, as I expected to be so busy as not to have time to follow out the known plans to carry out this purpose. Mr. McEvoy kindly sent me instructions as to how to proceed—methods that, in his judgment, would be the best, and I had decided to go by his advice in the matter, to the best of my ability.

Just a few days after this the weather turned cool and wet, and continued so almost continuously for weeks. Nothing was done at all, as it was rare that conditions were that a hive could be opened, and during this time many were heard to complain of starving bees. Of course, I did not fear *that*, anyway, and when at last the weather did clear, what was my surprise to find practically all of the stores used up and the hives boiling over with young bees. The result was that nearly all my bees had to be supered during fruit-bloom, and from the many adverse reports received that spring I am convinced that the Carniolan blood was responsible for the good results—certainly it was no credit to me, as I did nothing but smile over the fact that the bees were so well supplied during all the bad weather.

Malign the Carniolan bees as much as you will, yet the most prejudiced Italian worshipper will have to admit, on trial, that for good wintering and for brood-rearing in the spring, under adverse conditions, the Italians are simply "not in it."

Let me add that I have no queens for sale, lest I be misjudged in my motives in thus writing.

Bait-Combs in Supers

Not being a comb-honey producer it seems like presumption on my part to make any comments on what others write on that subject. However, after glancing over the article of Mr. Doolittle's, on page 405 (1909), and noticing there, as I have often before in his writings, the great amount of importance he attaches to having bait-combs in comb-honey supers, I could not help but reflect how the great majority of our extensive comb-honey producers here in Ontario absolutely want none of these baits, and, in some cases, at least, they claim they are a decided detriment. That these same men "produce the goods" no one will deny who has a chance to see their product, and in the matter of quantity—well, it is just a chance if they will take second place in that matter, either. I happen to know that a number on the "other side" have no use for the baits, either, and indeed a couple of New Yorkers come to my mind who have expressed themselves on the matter very forcibly.

Mr. Dooltttle certainly must have found the baits profitable else he would not advocate them so persistently; and, on the other hand, it seems a wonder that the many other comb-honey men have failed to discover their value—if value they have. I do not attempt to solve the difference of opinion, and as the matter of "locality" does not seem to enter into this proposition, I will leave the subject for each one's individual solution.

Chunk Noney in the North

Louis Scholl may advocate the production of bulk or chunk honey as much as he likes, and for all that he says seems to make it clear beyond a doubt that the thing is and will be a success in the South, yet I feel confident that not much trade will ever be done in honey in that form here in the North. Why? Simply because of the matter of granulation, if for nothing else. Granulated extracted honey is one thing, but granulated extracted honey and comb honey mixed is a different proposition. When the purchaser tried to liquefy a mixture of this kind, he would wonder what he had discovered when the resulant product would be revealed, and quite likely one application would be sufficient for the customer.

We Ontario bee-keepers feel glad to know that at last extracted honey here has gained such an honorable status that there will be no trouble for years to come in disposing of all we produce, at a good figure. As to comb honey in sections, the price is so high that the producers can well afford to cultivate the market for the style in vogue, and it is doubtful if a comb-honey producer could be found at present who would seriously entertain the thought of producing chunk honey as a substitute. This being the case, we will be glad to leave to our Southern friends the monopoly of producing the mixed article.

Our
Bee-Keeping
Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Golden Wedding of Mr. and Mrs. J. L. Anderson

It is a pleasure to have the opportunity of presenting to the sisters Mr. and Mrs. J. L. Anderson, who have lately celebrated their golden wedding. Perhaps the sisters will remember Mr. Anderson as the man who recommended that each sister should have a hive-lifter similar to one he gave an illustration of.

Of the 30 or more who witnessed the marriage of Mr. and Mrs. Anderson 50 years ago, only one person now survives.

Mr. Anderson was born in E. Berkshire, Vt., April 12, 1836, and in 1856 came to the vicinity of Marengo, Ill. Mrs. Anderson was born June 12, 1831, near Buffalo, N. Y., and in 1845, with her parents and nine sisters and brothers, came to the locality where she has lived ever since, being the only one now living of the early settlers who came to that vicinity.

In an account of the golden wedding, in the Harvard Herald, occurs the following:

> To be married, live continuously and then have the opportunity to celebrate the golden anniversary of their wedding in the same neighborhood is a privilege not enjoyed by many, but this honor and distinction have been granted to Mr. and Mrs. James Lee Anderson, who were married at Lawrence, Ill., 50 years ago the 25th of this (December) month.
>
> Mr. and Mrs. Anderson are well known in the community about Harvard, their home, having been at Lawrence for more than 50 years. Their acts of charity and good-will have made them popular with old and

Mr. and Mrs. J. L. Anderson.

young. Mr. Anderson, a thorough gentleman of the New England type, was fortunate in the selection of his life partner, and to her is he indebted in a large measure for many of the excellent qualities with which his children and grandchildren are endowed. Mr. and Mrs. Anderson are the only surviving members of their fathers' families.

Mr. Anderson bought his first colony of bees in 1862, and has been a bee-keeper ever since, his apiary usually numbering 100 or more. At present 112 colonies are peacefully passing the winter in his cellar. He has been for nearly 40 years a subscriber to the American Bee Journal.

Although having lived for half a century in the same village where he was married, Mr. Anderson seems to be not without roving tendencies, for in a recent letter he writes:

> "Mrs. Anderson and myself are quite well this winter for persons of our age. The hot weather is the hardest on myself. Possibly we may go to the North Pole next summer. If we do, we shall build a summer residence there, and hope you will all come and see us. I wonder if it will be a good place in which to keep bees! No danger of overstocking."

Coal-Oil as a Bee-Sting Cure

My cure for a bee-sting is to rub out the sting and apply coal-oil. I am a beginner, and have 77 colonies of bees.

Mrs. F. McLeod.

Burnstown, Ont., Dec. 24.

Seventy-seven colonies! That's pretty good for a beginner. Why didn't you tell us what success you have had with your bees?

A Woman and the Bee-Sting Cure

About all the cures of rheumatism by bee-stings reported so far involve only the "lords of creation." Now comes one of another sort, reported by W. A. Pryal, in Gleanings. He says:

> Mrs. Mary Ruttenbeck, something less than a year ago, became a sufferer from a very severe attack of articular rheumatism, the main point of attack being in her knees. The malady became so violent that she was not able to walk. The pain at times was excruciating. Her brother, Mr. Piercey, is employed at the Mare Island Navy Yard, this State, and is an ardent tender of a small apiary which he keeps on the island. Having read that bee-stings are a cure for the disease in question, he sent for his sister and had her submit to the "honey-bee-sting cure. The invalid was tenderly brought out to the apiary one fine spring day and seated in front of a bee-hive. A bee was deftly caught and made to jab its sting into the lady's knee. The insect performed its part of the operation in good style. Mrs. R. protested at being made a target for further stings. She thought the pain from one sting was sufficient for her for a lifetime—that it was enough to drive the disease from her. But Mr. Piercey thought otherwise. He was not planning to practice homeopathic bee-sting medicine—it was to be allopathic or nothing at all. So the stinging went merrily on, the patient all the while almost fainting with the added pain. Mr. Piercey was fast working his bees to death in this new-fangled occupation he had found for them, for he did not desist until 39 stings were duly planted in his sister's knees. Then she was carried away; but in leaving the apiary a bee, of its own free will, gave the patient a terrible jab in the neck—perhaps for good luck, or, may be, just to say that Mrs. Ruttenbeck "got it in the neck." Anyway, between getting it in the knee and in the neck she was a very sick woman for a few days. It looked for a time as if the cure were going to be worse than the disease.
>
> The turning-point came; and after a few more applications of a less number of stings she was able to walk. She found that it was not necessary to take drastic doses of 39 stings at a time. In June last she came to Oakland. It was about this time that I became acquainted with her, for a friend of hers came to me to procure good, strong, healthy bees that could be vouched for to sting good and plentifully when occasion demanded. I found a colony of Spanish-blacks that had a small percentage of Italian blood. I gathered some three dozen of them into a cage and told the gentleman to instruct the patient that the bees should be "well shaken before being taken." The instructions must have been followed, for in a few weeks the lady was able to walk from the electric-car line to my place, something like a third of a mile distant.

A Sister's Report for 1909

Dear Sister Wilson:—I thought I would write a few lines to let you know that I am still in the land of the living. Last year was a tough one for the bees. In the spring it was so rainy and wet that they had a tough time. I fed the bees in May and June. In July we had a short honey-flow, and the bees went to swarming like everything. In September we had a dry spell; I had to feed the bees, and I lost 15 colonies by starvation. I still have 44 colonies left and 2 nuclei. So I still have plenty to start with in the spring. I have all the bees in the cellar now. They gathered 1262 pounds of honey in July, but did not get any fall honey. I have the honey all sold at home, at 12½ to 15 cents per pound. If I had not doubled the colonies I would not have had any surplus honey.

Catharine Wainwright.

Tilton, Iowa.

I am very glad to hear from you once more, but sorry you didn't have a better year; still, 1262 pounds is much better than no crop. You did much better than we did, as we got only 1000 sections; had to feed too, and fight European foul brood into the bargain. And as your bees seem to be in a healthy condition, that is much to be thankful for.

I wish more of the good sisters would follow your example, and let us hear how they prosper.

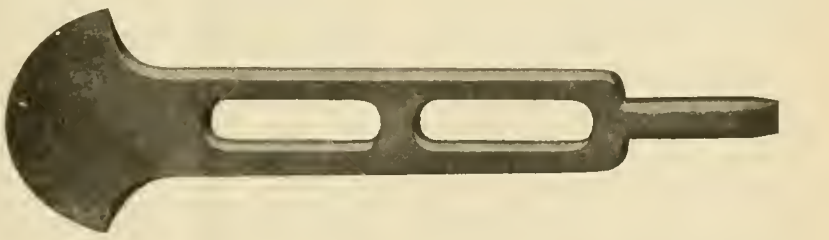
The Hive-Tool in the Apiary

In the work of the apiary every bee-keeper finds the need of some kind of a hive-tool. I do not think of anything at present that makes so much difference in the work as the tool one uses in taking off covers, prying up supers, and taking out dummies, loosening up frames, etc. Often, too, you want to clean out a hive, scraping it clean of propolis or bits of wax, cleaning the propolis out of the rabbets, etc. These different things need doing almost constantly, and if one hive-tool can be found that will answer all purposes, it will be indeed a treasure, and I just believe that we have found it.

The tool we have used in the apiary for the last 14 years is, we think, an ideal tool. In fact, I don't see how it could be improved upon. I am very sure we would feel utterly lost in the apiary without it. I wonder now how we were ever satisfied to get along with a screw-driver, which was the tool we formerly used.

The tool referred to was invented by the late Wm. Muench, of Minnesota, and patented, I believe, by him. It is made entirely of malleable iron.

The accompanying engraving gives quite a good idea of the tool, but you will have to try one for yourself if you want to know its worth.



The "Ideal" Hive-Tool.

The larger end is wedge-shaped, having a sharp semi-circular edge, making it almost perfect in prying up covers, or in prying supers or hives apart, as it does not mar the wood; while with the screw-driver the sharp edge often digs into the wood. This end of the tool is also fine in cleaning out a hive, scraping a cover, or cleaning off an excluder, or any work of that kind.

The middle part of the tool is 1 1-16 inches wide, and 7-32 thick. The smaller end is 1⅞ inches long and ½ inch broad, with rounded edges, and 7-32 thick, terminating like a screw-driver. This end is excellent in taking out dummies, loosening frames, etc. In loosening up the frames just stick the end of the tool between the frames, give it a twist, and it pries the frames apart every time without marring the wood in the least, as it has no sharp edges. This end of the tool is very handy when you want to destroy queen-cells, dig out a worm, or things of that kind.

Another score in favor of this hive-tool is that it is so light and easy to handle, the whole tool being only 8⅛ inches long just the right size to carry in my apron pocket.

If you think I am giving it too high praise, just get one and use it for a while, then try to get along without it, and if you feel as forlorn as I did when I lost mine for about a week, you will not think I have said any too much in its praise.

Southern Beedom

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

Prospects for 1910

The 1910 prospects in Texas are better than they have been for many years. Lots of rain, cold weather, *snow* and *ice* have made the outlook fine for a bountiful crop of honey.

Spring Examination of Bees

Our spring examinations consist of visiting every yard the first warm days in January and February, and seeing that every colony has sufficient stores for the spring brood-rearing period until new honey can be had. To do this, the shallow supers that are on all of our hives at all times, are simply tilted up; a glance gives an idea of the condition of the cluster and the stores below, while we "feel" the amount of stores in the supers when they are tilted back. We leave part of the winter stores in a super on each colony. Some may not need this, while others may run short. It is thus easy for us to exchange the supers of the two, and, presto, how easy it is to feed the needy ones!

Caring for the weak and needless colonies, and taking of notes finishes this work for another month.

That New National Secretary

It did not take the writer long to hear that some of his friends had pressed him into service, and a service which he is not sure he can perform as well as may be expected of him. Further, it was a surprise for me to hear of such a thing, not even expecting that a fellow "way down South," and in such an out-of-the-way place, had the least bit of a "show."

Since it has happened, and since I know it was the wish of the members that I should serve as their secretary, and the place was not sought by myself in the least—especially since I have already too many irons in the fire—it shall be my greatest pleasure to serve as well as I know how. Put me to work; tell me what you want me to do—why you wanted me in this place—and I shall be there, "Johnny-on-the-spot." I thank you all for the honor.

Bulk Comb Honey Production

Athough *any* hive already in use can be used for bulk comb honey production, there are *some* that are *better* adapted for this than others. And since my object of this month's article shall be to answer a number of enquiries, I shall endeavor to explain in detail.

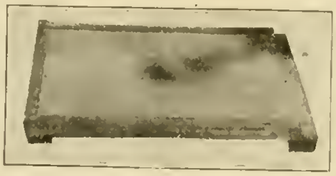


Fig. 1.—Scholl's Bottom-Board.

"Starting anew, what kind of hive would you adopt or advise for others to adopt, if bulk comb honey is to be produced?" are questions that have been asked me a large number of times.

For the beginner who does not know what he wants, or such as may not stay in the business, and who may later sell their outfit, it may be well to advise the regular 10-frame Langstroth size of hive-body for brood-chambers, as these are standard goods, and it is always easier to dispose of bees in such standard hives. I say it *might* be better. I am of the opinion that the time is not far away when certain *divisible brood-chamber hives* will be just as much standard hives as any other; and for this reason I am not sure but what it might be just as well for all who contemplate getting new hives, if they think they prefer the divisible hives with their many advantages, to adopt such hives as well, instead of putting money into deep-bodied hives, which may be regretted later. (That is what I have done.) The advantages in the different manipulations of the shallow hives over deeper ones are many, and one is enabled to accomplish things with much less labor and a saving in time that cannot be accomplished with deep-frame hives. And since this is especially true in bulk-comb-honey production this point has been mentioned, and it is a part of the answer to the question.

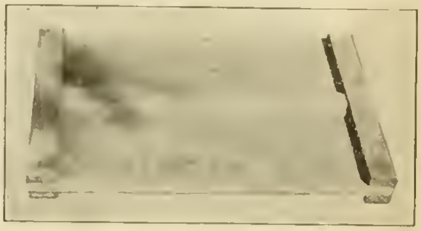


Fig. 2.—Scholl's Hive-Cover.

My hive is one of the simplest. There are only 3 different parts—the floor, cover, and a shallow body with shallow frames. Of the latter, as many can be used to the hives as needed, yet they are always the same kind, whether used for brood-chambers or supers, for comb honey or for extracted honey. The hive is one of simplicity itself.

Although I am an advocate of factory-made goods, because they are so much more accurately made, fit better, and give better satisfaction all around, I have made my own bottom-boards and covers; this because I can make them much cheaper, cost less in the first place, and last longer in the second place. But all other parts are factory-made—supers and frames. I have made some, and have bought many home-made hives of various styles, but all have more or less defects, and I do not want these in my hive-bodies and supers.

The bottoms are made of our common native yellow pine lumber, which is much more durable than white pine, and is much cheaper. As made (Fig.

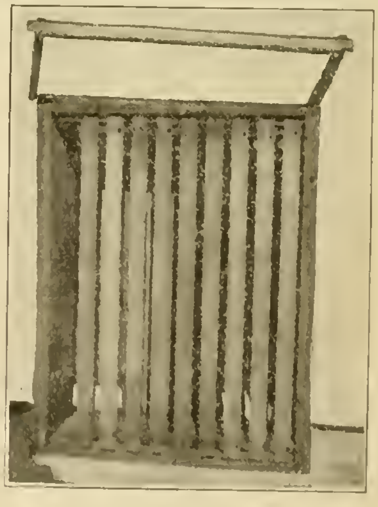


Fig. 3.—Scholl's Frame afd Shallow Story.

1) it has two pieces 1x8x21 inches for floor. Two end cleats 1x2x16 inches are placed at each end. Six penny wire-nails, 6 at each end—3 to each end of a board—are driven right through these and the cleats, and are then clinched underneath. The ⅜ thick cleats for the hive to rest on are then nailed on the upper surface as shown, and the whole receives thorough painting.

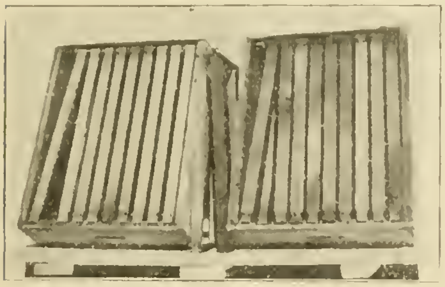


Fig. 4.—Narrow and Wide Top-Bar Frames.

The cover (Fig. 2) is made of the same material, 1x8x24 inches long, and has the same kind of cleats at the ends, only that one is placed above as well as below the ends of the boards. Long, slim, 10-penny wire-nails are nailed through the ends, cleats, board and all, and then clinched underneath. To tighten these up they are placed on an anvil. This makes the strongest cover I know of, as the cleats hold the boards with such a grip that they *cannot warp* or twist in any way. With a piece of an "O. G." batten nailed over the central joint, and the whole well painted, I have the best cover I have had after trying nearly all.

Now for the hive or super—which? It is all the same. Fig. 3 shows one on end, and also the frames. I advocate the 10-frame size as the best for all purposes, especially for my purpose, as I have tried them side by side with 8-frame sizes; and I would not hesitate to advocate the 10-frame size with my system of management for *comb honey* in the North as well as here in the South, as I believe that I could get better results, with less swarming, even there, than are obtained with the too small 8-frame hives. These supers are nothing other than the standard 5¾-inch deep shallow super with frames 5⅜ deep of Hoffman self-spacing style. They are just ideal for bulk-comb-honey supers, for extracting supers, and for divisible brood-chamber hives.

My frames have narrower top-bars than the regular ones put out, and are widely known as the "Scholl" frame, as has been mentioned before. The difference in the passage-way between the two kinds of frames is an important item, as one hinders the bees and queen passing from one story to another, while with my frames this is obviated. The difference shows plainly in Fig. 4.

Fig. 5.—Scholl's Nuclei.

Now these shallow stories are not only used as supers; I use them singly with a bottom and cover for the nucleus of a colony. Add another to it later with empty combs or honey, and brood perhaps, and my, how they build up to full colonies! Then one story after another is piled on, as so many supers after the honey-flow has begun until I find that the colony, as shown in Fig. 5, has grown into that enormous stack of the finest sweetness on earth—280 pounds of the very prettiest bulk comb honey from one colony, in Fig. 6. That was the record kept of my best colony, and meant a surplus that brought $33.60 from that one colony of bees.

So much for the description of the kind of hive I would adopt and advocate when starting anew for the production of bulk comb honey.

In the next issue will be shown what is in that stack of shallow stories.

Fig. —One of Scholl's Sentinels.

No Advantage in Producing Bulk Honey

I have been reading and studying the writings on bulk comb honey, and I am not able to see any advantage in the production of it at all. We bee-keepers are not supposed to go back to where our forefathers stood, 75 or more years ago, before the movable-frame hive was known, when they kept bees in box-hives, and handled the honey in chunk, or bulk, as you may term it. If we are going to do away with our section-comb honey and produce bulk-comb honey, what do we want with the movable-frame hives? We are living up to a fast day now, and the industries of our country are progressing more and more each year. Then, why do we bee-keepers want to produce a cheaper grade of honey to take the place of our nice, attractive section-comb honey. I say, if our Southern bee-keepers want to cut their noses off to spite their own faces, let them go. Suppose the farmers of this country want to go back to the old way of farming, our country would be bankrupt within two years. So it would be if all of our bee-keepers were to produce bulk comb honey—our bee-industry would be ruined.

Then let us look at the disadvantage we would have in handling it over our section honey. We would have to cut the combs, so there would be a loss by the honey dripping from the combs where they were cut. We also would have to handle it several times, which would be another loss, saying nothing about the smear we would have from beginning to end. We can take our section honey off the bees, case it, and haul it to market without getting one comb broken. I live 8 miles across two mountains to my nearest station and market, and if I were to produce chunk comb honey and take it to market, by the time I would get there with it you would not be able to tell whether I had comb, extracted honey, or what not, and I would not be able to sell one pound of bulk honey to where I sell 50 pounds of section honey. With section comb honey I can haul it 8 miles over the rough road to market without a single comb being broken.

So, my bee-keeping friends, it is no difficult matter to see the advantage we have of section comb honey over the old style of bulk honey. I think we bee-keepers should stick to the production of section comb honey, as we have an article we need not be ashamed of, and that we should go hand in hand to get our section honey to a higher standard, that we may be able to get better prices than we ever have had heretofore. I trust that we bee-keepers will take more interest in the production of section comb honey, that it may take the lead over all other grades of honey that are put on the market. T. A. Crabill.

St. Davids Church, Va.

If you had given my method of comb honey production a trial, Mr. Crabill, I believe you would have found that there are at least some advantages in it over the production of section honey.

I am not surprised at the attitude you have taken, because there were many Texas bee-keepers who criticised the method, even denounced it with disfavor, when the production of "chunk" honey was first advocated. But do they still do so? Nay! Instead, some of them are today the most extensive producers of this article. Their claim, at first, was the same as yours, but finding that they would be left badly in the background, which, both from a social and financial standpoint, became very serious, bulk comb honey production soon became to them as *easy, if not an easier matter* than producing either section or extracted honey.

Neither does such a change mean going back to the ways of our forefathers. It involves just as much study and systematic work to attain the highest results in bulk comb honey production as in any other, and the movable-frame hive is just as essential.

Neither can it be said that the honey produced is of cheaper grade, for if gathered from the same source, it must necessarily be the same in quality, whether produced in sections or frames. Of the two, the comb honey in frames is only the better in that it is ripened better—the combs are thinner in this case, and the ventilation in the process of ripening the honey can only be better on account of the continuous passage-ways between the combs.

After I have described the methods I employed in bulk comb honey production, and given a better idea of it all, and the advantages, the demand, and the profits over other kinds, I am sure that you will also look upon it with more favor.

Of course, it is needless to say that it is not my object to drive sections entirely off the market, for there is a place for them that must be filled, and the same can be said of the place for extracted honey. At the same time I know that bulk comb honey will find a good place also in time, and it will replace section honey to a great extent just as it has in Texas.

Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal or to
DR. C. C. MILLER, Marengo, Ill.
Dr. Miller does *not* answer Questions by mail.

Doolittle Division-Board Feeder.

1. In Doolittle's division-board feeder ("Scientific Queen Rearing," pages 68 and 69) are those partitions running *lengthwise* to keep the bees from drowning, as in the Simplicity and Alexander feeders?

2. If made wider than a frame (say 2 inches) would such partitions be necessary?

NEW YORK.

ANSWERS.—1. No, the inner width of the feeder is only 1 inch, so a bee can never have to swing more than half an inch to climb up one wall or the other.

2. I'm not sure, but I think 2 inches would be pretty safe. However, you can make safe for any width by putting in cork chips.

Feeding Granulated Honey in Combs.

Would combs in which honey was granulated before being extracted, and not taken out by the extractor, be all right for bees next summer, either for swarms or old colonies? Would the bees clean them out, or would it be an injury to them? WISCONSIN.

ANSWER.—It will be all right so far as the bees are concerned, and will do them no harm. In giving such combs to the bees it will be well, just before giving them, to spray them with water. That will make it easier for the bees to use up the honey, and will also save some of it from being wasted, for bees are likely to throw out some of the grains. But you better not use the combs as they are in extracting-supers. The old honey may help to candy the new.

Colony Dwindling.

I have one colony of black bees which has 25 pounds of honey. The bees are dwindling away in large numbers. Can you help me out?

GEORGIA.

ANSWER.—I don't know whether I can. You see I don't know what the trouble is, or indeed whether there is any trouble. Foul brood or some other disease may be present, but that would hardly make the bees die off in unusual numbers at this time of the year. The colony may have been queenless for some time, having only old bees, which have attained such age that they are dying off rapidly, and there is nothing to be done, unless it be to to kill them so they will not waste any more of their stores. There may be nothing wrong. Bees are constantly dying off from old age, and it would be nothing strange to have 100, 300, or more dying off daily in a strong colony.

Queen-Rearing Question.

I have now 100 colonies, and live in a good locality—horsemint. In "Simplified Queen-Rearing" (Swarthmore), I can not understand the following:

"If the pressed cups are first given to any colony of bees long enough for them to be polished on the inside, no failures in grafting will occur. Used cups are to be cleaned in the same manner, and new cups are first swabbed, as previously explained."

I have the Swarthmore series, but can not find the word *swabbed* explained. What does it mean, and how do I do it? My bees won't polish cups if I put them inside the hives.

I introduce fertile queens, virgins, and cells, without any trouble, failure, or loss of brood. I had no swarms, and had as fine a honey crop as possible. TEXAS.

ANSWER.—Unfortunately I have not before me the text to which you refer, so as to find the word "as previously explained," but as the cups are given in advance to the bees to be cleaned and polished, it is a pretty safe guess that the swabbing is to induce the bees to start the work of cleaning and polishing, and my guess would be that the cups are "swabbed" by being brushed out or moistened with honey or diluted honey. If that guess is correct, all you need to do is to daub with honey the entire inside surface of the cup.

Upward Hive-Ventilation.

I am a beginner and have packed my bees this winter in piano-boxes, 8 colonies in a box. They are packed very fine I think; sides, ends and bottom having about 4 inches of packing, the top having about 12 inches, with upward ventilation. Did I do right in giving them upper ventilation? NEW YORK.

ANSWER.—Opinions are divided as to the matter of upward ventilation, but with the large amount of packing wisely given on top, your bees ought to be all right.

Why Entrance at Side of Hive?

What is the reason for placing the entrance at the end of the hive instead of the side? I contemplate building tenement cases to hold several colonies, and by setting the hives lengthwise of the case the frames can be handled much more easily, although it will bring the entrance at the side of the hive.

NEW YORK.

ANSWER.—In Europe, hives are used with frames running parallel with the entrance, called the "warm arrangement," and also with frames running at right angles to the entrance, called the "cold arrangement." I think the warm arrangement is in more common use there than the cold. In this country the cold arrangement is used almost altogether. It allows the bees more readily to reach each frame, and allows a better chance for ventilation. If any great gain were to be made by having frames run the other way, I would not hesitate to make the change.

Spanish-Needle — Winter Hive-Entrances — Do Bees Freeze?

In the spring of 1907 I started with 4 colonies, one of which was in a log from the woods. Now I have 51 colonies, all in good condition. I use the Langstroth hive.

The season of 1898 I sent for 7 Italian queens, and last year Italianized all my bees; I find it quite a task to get queens purely mated, on account of my neighbors' black bees. But on the queens I sent away for, I certainly got *"stung."* Out of the 7 I got only 4 good ones. The best of them all was the queen I received in a clubbing offer. I take the American Bee Journal, and could not, nor would not, think of doing without it while in the bee-business.

1. What kind of a flower is it that grows here in Southern Illinois? It starts blooming about September 1, and lasts until frost. The plant grows from 2 to 3 feet high everywhere in the fields, and every plant will have from 20 to 30 yellow flowers about the size of a half-dollar and larger. When in full bloom the fields look like a sheet of gold. When the seeds get ripe they stick to one's clothes, and are very annoying. We call them "bootjacks," as they resemble a bootjack more than anything else. The leaf of the plant resembles the leaf of ragweed very much. We call it "Spanish-needle," but I don't think that is the proper name, for I never see it spoken of in the paper. If it were not for this plant, bees could not live here, as it is a great honey-producer.

2. Are drones produced by a drone-laying queen or a drone-laying worker, capable of fertilizing a queen?

3. How old does a young queen have to be before she will turn to a drone-layer, if she is not mated?

4. What is the cause of ice gathering at the top of the frames just under the cloth?

5. I winter my bees on the summer stands. What size entrance do you advise for this locality? We don't often have any weather colder than zero.

6. Would too small an entrance have anything to do with the ice accumulating?

7. Do bees often freeze to death with plenty of stores? ILLINOIS.

ANSWERS.—1. I hardly know how it has happened that you have seen no mention of Spanish-needle as a honey-plant. I'm afraid you haven't a bee-book. You cannot afford to be without one. Much has been written and said about Spanish-needle, which is also called boot-jack and golden coreopsis. In Root's "A B C and X Y Z of Bee Culture," J. M. Hambaugh reports that an apiary of 43 colonies averaged in 8 days 47 pounds each of Spanish-needle honey.

2. Yes, either of them. But I don't believe I would want them for best stock.

3. Three weeks or more.

4. The moisture from the breath of the bees. You probably need more or warmer packing on top of your bees. It should be warmer on top than at the sides. Moisture condensing on the sides of a hive does no particular harm, but on top it does. When it thaws it drops down on the cluster of bees.

5. An entrance ⅜-inch deep is good. The width depends upon the strength of the colony, perhaps an inch for each frame that is occupied by bees.

6. It might; for too small an entrance might prevent the escape of moisture.

7. No; unless the colony is too weak or a small cluster of bees get caught in a cold spell away from the main cluster.

Light Brood Foundation — Spring Requeening Queenless Colony—Queen-Excluders.

1. Do you consider light brood foundation sufficiently heavy to be used with your splints in regular Langstroth frames?

2. Is it possible, and advisable, to requeen a queenless colony in the spring by keeping them in the cellar longer than other colonies, and giving them a frame containing eggs from a colony which has started brood-rearing?

3. In your "Forty Years Among the Bees," you do not consider queen-excluders of much value to you. Would you consider them necessary if you were trying the method advocated in "A Year's Work in an Out-Apiary?"

ILLINOIS.

ANSWERS.—1. Yes, only in place of 5 splints, as with medium, 7 splints must be used with the light brood foundation. At least I did not feel safe to do with less than 7, and had good results.

2. Possible, but not advisable. It is not advisable to let a queenless colony rear a queen before there is a honey-flow, as the queen is likely to be very poor, and it would be still worse if the queen were reared in the cellar.

3. Yes, I think they are necessary in that. In some cases I think very highly of excluders, but they are not necessary to keep queens from going up into section-supers if the sections are filled with worker-foundation.

What Ailed the Bees?

I received my first copy of the American Bee Journal in 1879, and am still taking it. I kept my first bees in that year. I have 29 colonies in my door-yard, and some in other yards 3 miles away. I live in town on a lot 100 feet in front and 220 feet back. I secured about one-fourth of a honey crop this year (1909), of that black honey-dew. I sold it all at a fair price. I am expecting a good honey-flow next month (September) from heartsease or smartweed. My town is located on Big Raccoon, 18 miles north and east of Terre Haute, where heartsease grows abundantly. August has been very hot and dry. Last week it turned cool without any rain. We had 3 or 4 cool nights—very cool, but no frost. I noticed those cool mornings that my bees were dying very fast. Some of the hive-entrances would be filled full of dead bees, some of them very young, white brood taken from the comb. What is killing my bees? Is it the black honey-dew or foul brood? I thought they were starving at first, but when I looked in at them, I found them with plenty of honey. Then I feared it was foul brood. They have large brood-nests, and the brood looks nice and even, no sunken brood or bad odor in the hive. I found some drone-brood in the cells, and when I lifted it out with a tooth-pick, it was just the skeleton of a drone, and at the edge of the comb I found some worker-brood that was not capped. It looked like brood ready to come out of the cell, but when lifted with the tooth-pick, it was dead and looked dark. That colony was strong with bees, but the brood-nest was scattered. The bees have been very ill to handle this year. After the bees begin to fly on cool mornings, they would clean up all dead bees. Now, what shall I do? Your answers to others in the American Bee Journal have been a great help to me in the past. INDIANA.

ANSWER.—I am extremely sorry to say that your letter dated Aug. 25 was in some mysterious way mislaid, not turning up again until the beginning of the New Year to reproach me with its presence, and to remind me that among New Year's resolutions there should be one reading, "Resolved, That I'll not again mislay a letter to be answered in this department, nor let any one else do so."

I am very much puzzled to know what to think about your trouble. Some things in the case look like disease, but a good many don't. There seems to be some trouble with the brood, but you say the entrance of the hive would be full of dead bees, and some of them would be young bees. That seems as if the dead bees were mostly mature bees, making the trouble with the bees rather than the brood. On the whole, I am more inclined to suspect poisoning, although it was not at a time of year when spraying poisons would be going on. Of course, there might be poisoning in some other way. It could not very well be the honey-dew. That kills bees in winter, not in August.

It is possible that before this time you may have informed yourself in the case so as to need no suggestions from me. If there was poisoning, the trouble probably disappeared in a short time. If there was disease, that also may have disappeared with the cessation of brood-rearing, only to reappear with the beginning of brood-rearing next spring. In that case the thing to do is to keep watch, and when the first sign of anything wrong with the brood appears, send a sample of it, (a piece of comb 2 or 3 inches square) to Dr. E. F. Phillips, Department of Agriculture, Washington, D. C. If you write for it, he will send you a box in which to send the sample. There will be no charge, and you will have the best expert advice possible to obtain.

Preventing Swarming—Amount for Winter Stores—Sour Honey—Foul Brood, Etc.

I have a small farm of 62 acres, and have always kept a few colonies of bees, or for at least 20 years. I remember very well my first bee-keeping, putting boxes in the trees and in that way capturing my swarms. My bee-yard at present consists of 18 Italian colonies, 10 spring count. I intend to winter the bees on the summer stands, in single-wall 8-frame dovetailed hives. I am at the third 100-pound sack of sugar, feeding the bees. Last fall I had 26 colonies, but reduced them to 18, thinking the stronger the colony the less feed it would take to winter them. I can not remember such a poor honey-crop as the past season, and with so many flowers in bloom. A good many bees in this country will certainly starve.

1. How long can a bee live?

2. Will bees rear brood sooner in spring when wintered in the cellar on the summer stands?

3. How can I prevent bees swarming? I am running for section honey.

4. In what way will bees do better in the cellar?

5. About how many pounds of honey less can be fed to bees when wintered in the cellar than on the summer stands?

6. How high should the summer stands be from the ground for the hives to rest on? And how will it be best to build them?

7. What is the cause of sour honey that was taken out of supers about the middle of June?

8. What is the first sign of foul brood?

9. Do you think a Danzenbaker hive is a preventive of swarming more than any other hive? MISSOURI.

ANSWERS.—1. A worker-bee, in the busy season, lives about an average of 6 weeks. Some think less. It depends much on the work done. A worker born in the fall, doing no work that fall, may live 7 or 8 months. A queen lives 2, 3 or more years, in rare cases 5 or 6. A drone lives till he dies from starvation, the workers declining to feed him when they feel they can no longer afford it.

2. They begin rearing brood as a rule sooner outdoors than in cellar. Even in the north brood-rearing outdoors begins often, if not generally, in February, and in the cellar generally not till March.

3. I don't know. I wish I did. Some pages of "Forty Years Among the Bees" are taken up with telling what I do in my struggle against swarming, but just the best way is still an unsolved problem. If you like the plan, however, you may avoid swarming by making a colony queenless 10 days before the harvest and then giving it a young laying queen. You can get the secret of Dr. Jones' plan of preventing swarming by sending 25 cents for his book. (See advertising columns.)

4. Almost any old way so there is abundant ventilation of both the hive and the cellar, with the temperature at about 45 degrees.

5. It depends upon localities and conditions. Perhaps generally about 10 pounds.

6. Where it is not necessary to take special precautions against ants, it is well to have hives near the ground, say 4 to 6 inches. Just now there is a decided tendency toward concrete stands, and it may be well to have the hive rest on only a small portion of the stand, as when it rests on a flat surface there is a tendency toward water remaining between the stand and bottomboard and rotting the latter.

7. I don't know. Likely some peculiarity as to the source of the honey.

8. Dead brood. If at any time you find dead brood and don't understand it, send a sample at once to Dr. E. F. Phillips, Department of Agriculture, Washington, D. C.

9. No, I don't think that is claimed.

Bees, Management, Wintering, and Locality.

I have so far received 3 copies of the American Bee Journal, and have during that time read some very interesting things in it. I am not in the bee-keeping business myself, but am very much interested in it, and would like to be, but there are certain things I can not understand about it as yet. In the first place, many people claim to have secured from one to 6 supers of honey from one colony in one season; others one to 2 supers of honey, and from 50 to 100 pounds of extracted honey from one colony in a season, and still others have secured a tremendous amount.

This town is located about 50 miles west of New York City, in the Ramapo Valley, and I should judge from the writings of others that this is a very good locality for bees, as there is plenty of dandelion, clover, sumac, goldenrod, asters, and some basswood, and several other honey-yielding plants, although the bees rarely made a living here last year. One colony did fill one super, but had a scant store for winter. There were about 50 colonies of bees here last summer, and years before that there were not so many owned by different men, say 5 or 6, each man owning only a few colonies, perhaps the owners were a *mile* apart. Now there is one man who received the best results from his bees. He started about 5 years ago with one colony that he got from a tree in the woods, and every year since he puts up hives in different places in the woods and catches swarms, sometimes catching a nice-looking yellow swarm, and more times catching black swarms, so naturally the bees are mixed, but the Italians seem to be a little the best, but not always, for sometimes he catches a real black swarm that stores equally as much as any other he has.

Commencing in the spring, his supers are ready with foundation, natural swarming is allowed, most colonies swarming twice, and some only once. He hives the swarms, giving them 8 Hoffman frames with foundation. After swarming is over he puts on one super apiece, and as soon as a colony fills its super he takes this off and replaces it with a new one, if the season isn't too late, and the bees will perhaps fill this with comb, and fill 2 or 3 sections with honey, but he never thinks of getting over one full 24-section super from one colony in one season; and some colonies will partly fill one super, and some will not go up into the super at all, and store only just enough for winter; and still some will not store enough for wintering. He never requeens any colonies, or catches any drones, and, for wintering, the colonies are left outside on the east side of the hill. The hives are ⅞ or one-inch wood, with just an extra cover on, and no extra packing on the outside. Has he right kind of bees? Does he not manage his bees properly? Is the wintering too much for them? Is the locality too poor? What do you think about it? NEW YORK.

ANSWER.—Bunching your questions, I should say that the bees your neighbor has are probably not so very much to blame for his results, and from what you say about the flora, the pasturage is good. As to his management, he might do worse—if he tried hard enough. At any rate, if he had the best results, it must have been that his neighbors did worse. They must be experts at doing things the wrong way.

The man you speak of catches swarms in the woods every year. That's all right on his part, but some one must be doing pretty bad work to let so many swarms get away. Now let me recount some of the things that he does that are not good, and then tell how you will do when you get to be a good bee-keeper:

He puts supers on after swarming is over. You will put them on before there is any swarming, about as soon as you see the very first white-clover blossom.

He allows most colonies to swarm more than once. You will never allow any colony to swarm more than once, and will make some effort to keep them from swarming at all.

He does not give a second super until the first is removed, and appears never to have on a hive more than one super at a time. You will, as soon as the first super is about half filled, raise it up and put an empty one under it, and a third one under the second when the second is perhaps half filled, and sometimes you will have 4, 5 or 6 supers on a hive at one time.

He never requeens nor kills off drones. You will be likely to requeen a colony which doesn't do satisfactory work, unless you are satisfied the fault does not lay with the queen; and although you may not kill any drones you will take care that there is not a lot of drone-comb in every hive to rear unnecessary drones.

He winters outside with no protection. You will have your hives well packed, especially on top, or perhaps better still you will winter the bees in the cellar.

Now let me make up another thing out of my own head. He has no text-book on bee-keeping. You will have a bee-book—more likely two or more. You can get along without a bee-paper (but you won't), but you can't get along without a bee-book. Not unless you want to lose money on bees.

Getting Strong Colonies in South Africa.

I am an American far from home, and bee-keeping is a hobby of mine. I have about 30 colonies of bees, mostly Doolittle strain. I have a few native queens (5 or 6), but will supersede them with Italians, as the wild bees are too vicious. The wild bees are wonderful breeders, breeding practically the year through, and are good honey-gatherers, too, but are so cross that it takes all the fun out of it. I have known them to sting everything in sight within 100 yards from the hive. And it is a common thing for them to kill dogs and fowls.

The Doolittle Italians are as good, or better, honey-gatherers, and are very gentle, but I find trouble in keeping a big force of them ready for the harvest, tor when the honey-flow slackens, the queens stop laying; while the natives, if there is honey in the hive, will keep right on breeding.

Our spring begins about August 1, and in September and early October, there is a light honey-flow. This year I took an average of 15 pounds of extracted honey. After this there is no honey or pollen until the rain comes in October or November. This year the rains came the last of November. Ten days ago none of my Italians were laying, although I gave them a little syrup each night for about 10 days. Now I find queens are just beginning to lay, and a little pollen is coming in. We have had 7 or 8 inches of rain, and the main honey-flow will come in about the New Year.

Remember, this is our summer. The temperature before the rain was around 90. Bees were as quiet as in the winter time and not breeding. I would like a suggestion as to how to get a hive full of bees in time for this main harvest. The harvest comes before the queen is laying to her full capacity, and with the colony none too strong, they are very inclined to fill the brood-nest.

How would it do in September, with our light honey-flow, when the bees are building up strong and rather inclined to swarm, to put on an upper story of full frames; put the queen in the story with a queen-excluder below this, and above the brood-nest, and in the brood-nest put a ripe queen-cell? Would the queen be accepted and in due course begin laying? If this would work, and I could have the two queens laying for a couple of weeks, and then kill the old queen just before the honey-flow stopped, I think I could keep a large force of the old bees over for the main flow, and the young queen would be more likely to lay during the dearth of honey, particularly if I left considerable honey in the hive. RHODESIA.

ANSWER.—You have just the problem I have to deal with every year—getting colonies strong enough for the first flow—only you have a very different climate. You are about as far south of the equator as Cuba is north. Thus you have a hot climate compared with mine, and with the seasons reversed; so I do not feel very competent to advise, but I can tell what I think.

If I begin feeding early I may do more harm than good, setting the bees to flying in weather too cool. I suspect you don't have that trouble. If I understand the matter correctly, your weather is favorable enough, only the lack of forage results in no breeding. The thing to do then is to come as nearly as you can to giving the bees an artificial pasturage by feeding. Two parts of water to one of honey ought to be an ideal food, although 8 parts water to 3 of sugar may answer. Feeding every other day may do, but feeding every day is better. Enough should be given so it will about all be worked up into brood. Try a pint or more daily, and increase until you find a very little is left unused in the combs. If too little is given, the bees will not feel they can afford to breed freely; if too much, the queen may be crowded; but better too much than too little. Of course, if you find too much is stored in the combs, you must decrease.

Now as to when to begin. As the honey-flow you have begins about New Year, and as it is about 37 days from the time the egg is laid until the worker reared from it becomes a fielder, it will be seen that if a lot of eggs are laid Nov. 25 they will give fielders for New Year. But if the laying begins only Nov. 25, then the field-force will only *begin* Jan. 1, and will be a feeble affair. Moreover, you say the queens do not begin laying until after you have been feeding about 10 days. So the feeding should begin some time before Nov. 25; just how long before, it may not be easy to say. Taking this into consideration, and remembering that it is easier to keep queens laying than to start them again after they have stopped, the wise course will probably be to begin feeding very shortly after the first flow ceases, and before the queens stop laying.

I'm afraid your plan of putting the queen over an excluder and a queen-cell below would not work to your satisfaction. It might induce swarming upon the emergence of the young queen. Moreover, you would probably have no greater force from the two queens than with one, for one queen would probably lay all the eggs the force of bees could take care of. The Demaree plan—the reverse of your plan—will work better, and is very satisfactory where extracted honey is in view. Put all but one frame of brood in the second story over an excluder, leaving the queen in the lower story with one frame of brood and empty combs or foundation, and destroy the cells in the upper story, if any, in 10 days.

Reports and Experiences

Report for Season of 1909.

I started in the spring with 25 colonies, and out of the 25 only 14 produced any surplus. I took from these 14, 384 pounds of dark honey, an average of 20 pounds to the hive, while in 1908 the average was 53 pounds per colony. I have now 29 colonies, all packed in forest leaves, and in splendid condition for wintering.

About the middle of August I removed all the supers, and what they gathered from then until frost they stored in the brood-chamber for winter supplies. When I weighed them, just before packing for winter, nearly all ranged in weight between 60 and 75 pounds per hive, so I estimate they have from 30 to 45 pounds each to winter on.

Gosport, Ind., Jan. 14. WALTER GOSS.

Bees Covered with Deep Snow.

I have 21 colonies, all in good condition for the winter. I winter them on the summer stands packed with straw. They are now covered with deep snow. We had heavy snowstorms for fully 3 weeks.

W. A. DAHLKE.

Ebenezer, N. Y., Dec. 29.

Bee-Industry in Mississippi.

The bee-industry is in a very primitive condition right in this locality. I have been South only four years, but believe it a good location, as I am only one mile from the great ti-ti swamp, which never fails to bloom early in spring. My bees did not store much surplus, but went into winter with an abundance of stores, and I hope for a good honey-year for 1910. I bought 5 new swarms of black bees and requeened with Italian stock. I now have 7 strong colonies.

Pecan, Miss., Dec. 30. J. D. GOULD.

Painted or Unpainted Hives.

In order to set you right on the subject of "Painted or Unpainted Hives," kindly permit me to remark what every one knows, that bees invariably coat the inner surface of their hives with an air-and-water-excluding substance. Get clearly in mind that the bees render the surface of their hives on the inside tight, so as to prevent the passage of air or water, either into the hive or out of it, and nothing is left but to paint the hive in order to lengthen its days of usefulness. There may be a question as to the proper color to paint the hive, but there is no question that the hive should be painted.

J. J. FOUTS.

Gonzales, Tex., Jan. 19.

Season of 1909 the Poorest.

My experience runs back about 35 years, and I owe what success I have attained, very largely, to the information I have received from bee-papers, and I feel even now that I cannot very well get along without them.

The year of 1908 was a splendid season here, but 1909 was one of the poorest seasons I have ever known; no surplus and only very late in the season did the bees get enough to winter on.

My bees are housed in a closed bee-shed packed in straw. I wintered them the same way last winter without the loss of a single colony. G. T. WILLIS.

Hoopeston, Ill.

Not a Very Good Season.

I began the season of 1909 with 4 colonies of bees in the spring, and increased to 10 during the spring and summer. Some of the new swarms I found, some were given to me. I took about 200 pounds of comb honey from 5 or 6 colonies, the others barely storing enough to winter on. It was not a very good season.

In September I was appointed to this place. I chartered a car through, and having to put the team in the car with household goods, I decided to sell the bees, thus avoiding the danger of their getting out and stinging the horses. They brought $3.50 per colony. I have no bees now but will stock up again next spring with a few colonies, as I have some emtpty 10-frame Langstroth hives,. so I can look out for stray swarms.

(Rev.) J W. STINE.

Sperry, Iowa, Dec. 31.

Poor Season in 1909.

The past season was a very poor one for bee-keepers in this section. No clover to speak of. We do not have a great deal of basswood here, but what we have was full of bloom. However, even the basswood bloom did not seem to furnish much nectar. Nevertheless, I secured a few sections of very fine basswood honey. The main part of our honey was from honey-dew, and very inferior at that. My bees went into winter quarters with plenty of the last-named stores, but as the winter is severe and continuous, I am somewhat dubious as to the result. My bees have not had a flight for 7 weeks now, and no prospect for a flight soon.

The colonies all seem healthy up to date, and we are all hoping for the best.

Clover went into the winter in the best possible condition, and unless something unforeseen happens we will have plenty of clover-bloom the coming summer. Clover furnishes our main honey-flow here, although there are several other sources auxiliary, such as basswood, goldenrod, Spanish-needle and a few others.

Cromwell, Ind., Jan. 13. E. H. UPSON.

Extracted Honey.

"The Two Cans of Honey" in the November and December (1909) numbers, is a "corker" and hit the nail right on the head. For extracted honey I always have 2 full-size supers, and 3 for the most of them, although it is seldom necessary, as 100 pounds is generally the limit. But some exceptions happen, and I do like to see them 4 high, but the exception was the other way this year, although I have great hopes for 1910. But let it come. I am ready for it.

I do not see anything in the American Bee Journal that could be spared. It is about as good as it is possible to make it; at least, for a dollar a year, and as long as I can get the dollar, I intend to have the Journal.

O. K. RICE.

Gray's River, Wash., Dec. 27.

Dry and Poor Season.

The season of 1909 was very dry and poor for bees. I started with 4 colonies last spring, got 78 pounds of extracted honey, 43 sections, and increased to 7 colonies. I have bought 2 colonies, making 9 to begin with next spring. I hope next season will be much better, as I notice the honey-bearing plants are getting in a good start right now. We have had plenty of rains in November and December, and now. The last winter was very dry for the honey-plants to get a start.

Last spring I tried to transfer a colony from a box-hive to a frame hive, and I did it all right, at least I thought I did. When I got through I left the entrance full width, and honey smeared all about the hive, and there came the robbers, and took what little there was. Next day I looked in the hive and found that the bees had gone for good to the woods. So I see a person must be careful, and clean off all the spilled honey, and spill as little as possible, and not do the transfering too early in the spring—better to wait till the bees begin to store, then there will be no danger of robbing.

I reared a few Italian queens in the spring, and will try to rear more next spring, if my bees get through the winter all right. There are no modern bee-keepers in this settlement; some farmers have a few box-hives of bees, and some of them visited me. When I showed the queen in my frame-hive they wondered and said, "That is the first one I ever saw. Oh. is *that* the queen?"

I like the American Bee Journal fine. It contains so much good reading for the bee-keeper. I am inviting the Texas bee-keepers to write more for these columns.

Bellville, Tex., Jan. 12. JOS. JEZEK.

Keeping Bees in Washington.

I am located on a fruit-ranch in the beautiful Columbia Valley, near the mouth of the Okanogan River. We came here a little more than a year ago, from the Sunny South, and just as soon as we were settled in our new home, I began to look around for some bees, for I felt lost without them. There were none to be had in this part of the valley, but finally I learned the name of a bee-keeper at Wenatchee, and in a very short time I was in possession of one of his best colonies. They built up very rapidly despite the cool, backward spring, and the hive was soon boiling over with bees. As they were very dark hybrids, I decided to Italianize and divide them at the same time. So ordered a couple of queens, but they were probably chilled in the mails, for they both died soon after introduction, but not before one of them had laid the combs nearly full of eggs. In a few days there were 3 very fine queen-cells sealed; in fact, they looked so fine I could not bring myself to throw one of them away, so I just divided the strongest colony again and saved all three cells.

Happily each one hatched, and in due course of time were laying nicely. But as each colony by this time was a mere nucleus. and I had no brood nor even drawn combs to give them, they were very slow building up. The weather was so cool and windy all summer the bees could not work more than half the time. There was not a day, however, that I can recall, suitable for bee-flight, that they did not bring in considerable honey, so I managed to get the combs built down and the hives heavy with stores for winter use. I have them in the cellar, but believe they would winter very well on the summer stands.

We have no alfalfa, no clover, nor any other artificial pasturage here. The entire valley, where susceptible to irrigation, is going into fruit, and the trees are too young to be any help to the bees.

I was in the bee-business in South Texas a good many years, but the seasons here are so different from what I have been accustomed to it is almost like starting over and learning everything anew.

Mr. Grigsby, of California, touched on a point of much interest to me, but his opinion differs from mine. I would say, if possible, give us more pictures. I always like a peep at the apiaries, if neatly arranged, no matter how few the hives. And if I might make another suggestion, give us more pictures and descriptions of honey-plants from different parts of the world.

J. D. Yancey.

Bridgeport, Wash., Jan. 17.

Why Honey Brings the Same Price as 20 Years Ago.

In answer to the question, "Why Are These Things So?" by G. M. Doolittle, in the January number, I will try to give an answer why I think prices have not changed.

First, because we depend too much upon the commission merchant to sell our crop for us. Another thing is, the man who does not care how he puts his honey on the market. Then, honey is not used as other foods, but more as a luxury. Honey also has many substitutes, while other foods have not. If we would try to sell our honey by advertising in some good journal or paper, we soon find we have better prices. But in order to do this we must send out samples of what we have, and be sure it is all right. And after we get our customers we will have no trouble in keeping them and getting a good price for our product. That is, if we still give them good, ripe honey.

Mr. Doolittle said that honey does not advance in prices with other farm produce, but still takes a "slump" when those things do. I think he must be mistaken in this, for honey is governed as to the amount produced as are all other things which we raise. If Mr. D. had taken the market price on eggs and butter along in the month of May, he would find that eggs were not 40 to 50 cents a dozen, as stated here.

I will say again, put your honey up in good order; have it good and ripe; sell direct to the consumer, and it will not be long till we have better prices. There are now also 5 bee-keepers to where there was one 20 years ago.

Now, I have told you how we can get better prices, and why I think they do not rise; I would like to hear from others on this question.

Ray A. Hamilton.

Donovan, Ill.

Pictures of Apiaries—Non-Swarming.

Editor York:—I have read the November number of the "Old Reliable" with the usual pleasure, and the best of all was that nice, kind reproof you gave me concerning the little protest I offered regarding pictures of faces and apiaries. Although it made me feel just a little ashamed of myself, I must confess that it did me good to read it, in more ways than one. Mr. York, you are certainly an artist. Send on your pictures. I have no more to say. I suppose I have gotten myself into business by speaking of the compliments that have been passed on my apiary. I have received a number of cards and letters already urging me to send the picture of that *beautiful* apiary for publication.

One sister bee-keeper in Ohio says she wants "to see the photo of YOU," underscoring the word "you" twice, "and of your 164 colonies, in the American Bee Journal," signing her name. A lady bee-keeper in Texas writes: "I earnestly request you to send the photograph of yourself, family and apiary, to the editor of the American Bee Journal for reproduction," and solicits my subscription to another bee-paper.

Like the Feast at Cana, the best came last. It is a letter from Mr. B., a Minnesota bee-keeper, who sent his picture and the picture of 20 colonies of his apiary, if I mistake not. He wrote me quite an extensive letter, and really he said so many kind things to me about it, and all he said was said so very courteously, and in such gentlemanly style, that I enjoyed it, and filed it away to look at later. It really made me love him, and I wish I could meet him.

I believe that bee-men are generally, above all, gentlemen. If I did misbehave a little, I must confess that Mr. B. made me feel just as if I had been a little rude. I offer my apologies to anyone whose feelings I may have touched.

Just a word to those good sisters who solicit my picture, and that of my apiary. If I should reconsider and send it (which I do not like to after all I have said, someone being sure to think I was simply seeking an invitation). it would be after I have made some changes in my apiary grounds, which cannot be done before the fall of 1910. I will in the near future write for publication in the columns of the American Bee Journal a plan I have discovered and put into practice, which has proven with me to be a sure and unmistakable preventive of swarming in an apiary run solely for extracted honey. I treated each and every colony (115) that I began with in the past spring, many of which had sealed queen-cells, and just on the verge of swarming, all of which cells I found cut down a few days later, and all ideas of swarming abandoned. While the past spring this part of Southern California seemed to be in the grip of a swarming epidemic, not one of my colonies showed any further disposition to swarm after being treated. It is simple and absolutely inexpensive.

C. L. Grigsby.

El Casco, Cal., Dec. 6, 1909.

[We will be pleased not only to have the picture of Mr. Grigsby's apiary, but also the description of his non-swarming methods.—Editor.]

Moisture Above Brood-Nest, Etc.

I have watched the columns of three bee-journals to learn the thickness or thinness of lumber used to cover the brood-nest. I was using inch boards, until several of them warped, one allowing the condensed moisture to accumulate on the sawdust and run back into the hive, and chilled the queen into a drone-layer. Then I made all new covers of ½-inch lumber with three cleats nailed across-wise. I just examined to see results. All lie flat and sealed. I believe much moisture will escape through this thin cover, and pass up through the 18 inches of sawdust above. I never want paint or any of its relatives, nearer than 3 inches of a brood-chamber where winter-cases are used. I used quilts until the bees gnawed through. A good queen crawled up between quilt and cover, and I found her dead. I generally lay a rock on the cover in summer, but if left on in winter it will condense moisture that will soak a cover in one spot where it touches. I give all hives one inch slant to the south, that accumulating moisture may run out of the entrance. There are very few days but that snow will pack here. No danger of entrances clogging with ice.

Seven to One Eggs in a Cell.

I received a queen August 13, 1909, that, to all appearances, was just a good, ordinary 3-band producer. She had traveled about 2000 miles. I gave her to some good-positioned 3-handers to eat out of the cage. A sectional hive of 8 combs, 4 inches high, all honey but 3, that were partly filled, was her laying ground. I looked in 5 days after, and a very few cells had one egg in it, the rest had from 2 to 7. Then I found the queen. Of all the monstrosities in the shape of a queen, she "took the cake." Her body was longer from tip of wing back than toward the thorax, and distended like a Baltimore & Ohio locomotive. "Good young lady, you fill the bill." Then I gave her more bees and 6 empty combs that she filled one egg to the cell. Now some would condemn, but I reasoned she *is* healthy, prolific, and in a cooler climate, that she has acclimated to at once. Her bees hatched out *one* bee to a cell, 3-banded, gentle and good workers. I wrote to the man that sent her, but he misunderstood and offered to replace her, but I declined the offer. Such queens are good enough for me.

Feeding Bees.

I have dropped onto a plan for feeding at anytime consistent with necessities, but am a little in debt to Dr. C.C. Miller for that almost indispensable 2-inch space under the bottom-bars. I have the best success here in sight of snow-capped mountains, by keeping all hives in well-painted wintering-cases, packed with sawdust all the time. Many contrivances used in the single-walled hive I can not use.

I cut a slot 2 inches deep, and 12 inches long for an entrance. My hives sit on a rim 2 inches high. Here, where timber is plenty, I make a dummy to fill up to within ½-inch of the brood-frames. This dummy is slanted on the front end, the lower edge comes flush with the outside of the case. I drive 2 staples in on the front end, have 2 wire hooks, that I hang on the outside of the case, when not in use, on the back side of the case. I make an entrance-block to cover the opening 14x2½x2, with a 2x⅜ notch cut out of the under side. With this device one can feed whenever consistent without danger of robbers, or bees rushing out, by closing the entrance tight. There will be sufficient air in this large space.

I use the unprecedented brood-comb of only 4-inch depth, Langstroth length the other way, and 16 combs in 2 sections completes a hive. For extracted, comb, or increase, the sectional hive for me.

F. F. George.

Fraser, Idaho.

Eastern New York Bee-Keepers' Convention.

The second annual convention of the Eastern New York Bee-Keepers' Association was held December 8, 1909, in the Common Council Chamber of the City Hall, Albany, N. Y. The president, W. D. Wright, called the meeting to order. At the calling of the roll of 53 members, only 20 were found to be present.

The minutes of the last convention held at Catskill, N. Y., were read and approved. At the collection of dues, 20 members responded and paid their dollars.

A motion was adopted that all dues shall be payable from January 1st of each year.

The president presented an interesting and entertaining address.

The annual election of officers resulted as follows: President, W. D. Wright, of Altamont; Vice-President, T. D. Moores, of Athens; Second Vice-President, A. L. Fisher, of Central Bridge; Secretary, S. Davenport, of Indian Fields; and Treasurer, M. A. Kingsman, East Greenbush, N. Y.

The president, W. D. Wright, and secretary, S. Davenport, were elected delegates to the State Convention of Bee-Keepers' Societies.

The secretary suggested the propriety of taking a statistical report from members, of their bee-keeping and its results; but on soliciting the same, some discussion developed much opposition, and the subject was laid on the table.

Geo. B. Howe and Irving Kinyon, delegates to the State Convention, also Alden Hilton, made extended remarks on interesting topics.

The time of the convention was mostly taken up with routine business, as it was to be followed in the afternoon by the convention of the New York State Association of Bee-Keepers' Societies.

S. Davenport, *Sec.*

Indian Fields, N. Y.

Honey as a Health-Food

This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed *free* at the bottom of front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

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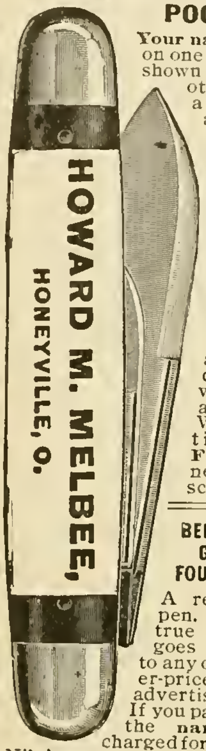

Your name and address put on one side of the handle as shown in cut, and on the other side pictures of a queen-bee, a worker, and a drone. The handle is celluloid and transparent, through which is seen your name. If you lose this knife it can be returned to you, or serves to identify you if you happen to be injured fatally, or are unconscious. Cut is exact size. Be sure to write exact name and address. Knife delivered in two weeks. Price of knife alone, postpaid, $1.25. With year's subscription, $1.90. **Free** for 3 new $1 subscriptions.

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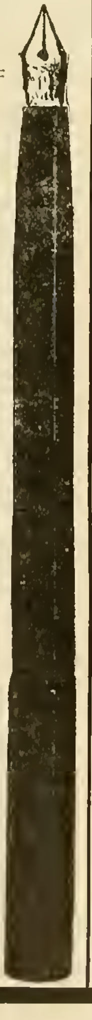
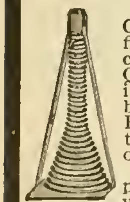


A really good pen. As far as true usefulness goes it is equal to any of the higher-priced, much-advertised pens. If you pay more it's the **name** you're charged for. The Gold Nib is guaranteed 14 Karat gold, Iridium pointed. The holder is hard-rubber, handsomely finished. The cover fits snugly and can't slip off because it slightly wedges over the barrel at either end. This pen is non-leakable. It is very easily cleaned, the pen-point and feeder being quickly removed. The simple feeder gives a uniform supply of ink to the pen-point without dropping, blotting or spotting. Every bee-keeper ought to carry one in his vest-pocket. Comes in box with directions and filler. Each pen guaranteed. Here shown ⅔ actual size.

Price alone, postpaid, $1.00. With a year's subscription, $1.70. **Given free** for 3 new subscriptions at $1.00 each.

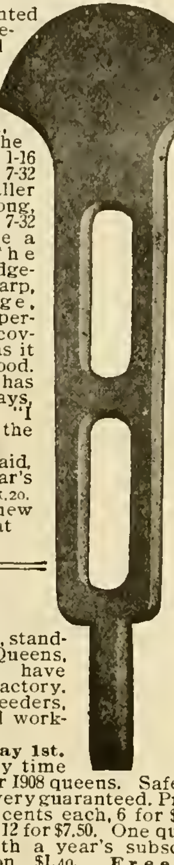
QUEEN-CLIPPING DEVICE



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. 4½ inches high. It is used by many bee-keepers. Full printed directions sent with each one.

Price alone, postpaid, 25 cents. With a year's subscription, $1.10. **Given free** for 1 new subscription at $1.00.

IDEAL HIVE-TOOL



Exactly half actual size.

A special tool invented by a Minnesota bee-keeper, adapted for prying up supers and for general work around the apairy. Made of malleable iron, 8½ inches long. The middle part is 1 1-16 inches wide and 7-32 thick. The smaller end is 1 7-8 inches long, 1-2 inch wide, and 7-32 thick, ending like a screw-driver. The larger end is wedge-shaped having a sharp, semi-circular edge, making it almost perfect for prying up covers, supers, etc., as it does not mar the wood. Dr. Miller, who has used it since 1903 says, January 7, 1907; "I think as much of the tool as ever."

Price alone, postpaid, 40 cents. With a year's subscription, $1.20. **Given free** for 2 new subscriptions at $1.00 each.

PREMIUM QUEENS

These are untested, standard-bred, Italian Queens, reports of which have been highly satisfactory. They are active breeders, and produce good workers.

Sent only after May 1st. Orders booked any time for 1908 queens. Safe delivery guaranteed. Price, 75 cents each, 6 for $4.00, or 12 for $7.50. One queen with a year's subscription, $1.40. **Free** for 2 new $1 subscriptions.

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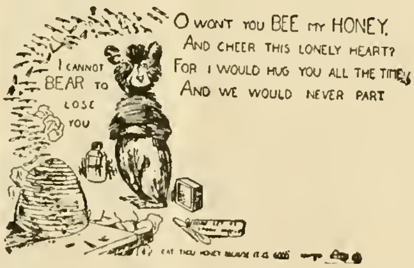
O WONT YOU BEE MY HONEY,
AND CHEER THIS LONELY HEART?
FOR I WOULD HUG YOU ALL THE TIME,
AND WE WOULD NEVER PART
I CANNOT BEAR TO LOSE YOU

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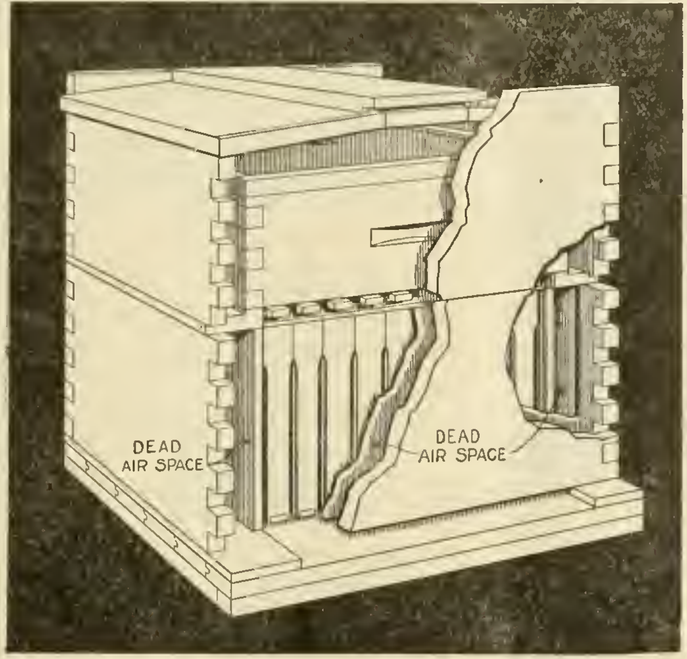

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Our Book Notices.

By LEWIS EDWIN YORK,

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Great Names and Nations.—By Harmon B. Niver. Illustrated. Chicago: Atkinson, Mentzer & Grover. 240 pages. Cloth. Price, 65 cents.

The purpose of this book is to give the youthful reader a clearer survey of the old world as a background for the study of American life. It is entirely unlike any other book written for boys and girls.

Boy Life.—By William Dean Howells. Stories arranged by Dr. Percival Chubb. Illustrated. New York: Harper & Brothers. 100 pages. Price, $1.25.

All of Mr. Howells' work possesses charm and finish. In these selections he is at his best. "Boy Life" is a classic based on *present* day interests. "Tom Sawyer" and "A Boy's Town" will ever be favorites.

Adventures in Field and Forest.—By Spearman, Martin, Palmer, Drysdale and others. Illustrated. New York: Harper & Brothers. Cloth. 212 pages. Price, 60 cts.

The authors of "Adventures" have produced 15 charming stories that appeal to the young who have a love for the open. Animal nature and human nature are revealed in striking situations, and all is told with consummate skill.

The Social Spirit in America.—By Charles R. Henderson. Chicago: Scott, Foresman & Company. Cloth. 358 pages. Price, $1.50.

In 17 chapters of inspiring, helpful, illuminating outlines, the author has produced a really modern text quite out of the ordinary in its inspirational quality. Mr. Henderson is an unusually close and careful observer, and he sees truth where others overlook it. To any one who is seeking a clear statement of modern life in all its variety, with its many new adjustments and relationships, this book will prove a joy and a blessing.

National Ideals Historically Traced.—By Albert Bushnell Hart. Illustrated. New York: Harper & Brothers. Buckram. 400 pages. Price, $2.00.

This is volume 26 of the great series known as The American Nation, of which Dr. Hart is editor-in-chief. Though one of a series it is complete in itself, covering the period bounded by the dates of 1607 and 1907. This volume dedicated, "To Theodore Roosevelt, Practicer of American Ideals," is not a book for children; it makes its strongest appeal to mature judgment and ripe experience.

The Hero of Erie.—By James Barnes. 10 full-page illustrations. New York: D. Appleton & Company. 167 pages. Price, $1.00.

Oliver Hazard Perry's name is familiar to every American school-boy, and few names are associated with more heroic adventures, more patriotic devotion, or more charming bravery. No boy will remain unchanged by the reading this book. It appeals to the red blood in one's makeup. It furnishes an outlet for the forces that need expression in every growing boy. It points the way to heroic achievement. It restores orientation to the lad who has lost his way.

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Full colonies with Tested Queens, in 8-frame Langstroth hive, $7.00 per col.; in same hive with 10 frames, $7.50. Colonies in lots of 5 or more, 25 cents per colony less.

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One 3-Hoffman-Langstroth-frame Nucleus, $2.50; in lots of 6 or more at $2.25 each; price of queens to be added. Orders for nuclei filled about May 10th to 15th, and thereafter.

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Tested Italian, each $1.50; 6 for $7.50; or $13.00 per dozen.

I have 50 choice Italian breeding-queens, either golden or leather-colored, at $2.50 each. "First come first served."

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Italian (warranted) 75 cents each; 6 for $4.00; or $7.50 per dozen. Carniolan or Caucasian at the same prices.

If you have never had any of my Bees or Queens, you should give them a trial. Satisfaction guaranteed. Address all orders to

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38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

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	1	6	12	1	6	12	Select Breeder	$4.00
Untested..........	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Nuclei; no queen 1 fr.	2.00
Select Untested..	1.25	6.50	12.00	1.00	5.00	9.00	" " " 2 "	3.00
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Select queen wanted and add price to price of nucleus or full colony.

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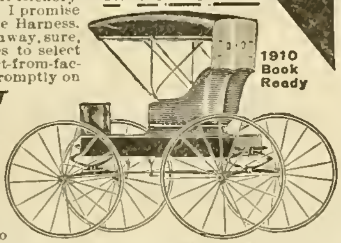

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I have bought all the bee-supplies and machines of the Minneapolis Wood and Machinery Co. Send me a list of what you need, and get the right price. Also **Adel, Carniolan, Italian, and Caucasian Queens.**

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If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 90c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2A9t

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MR. BEEMAN, take notice! For low freight and quick service our location cannot be excelled in the State. Don't delay. Order now. You can be saving your honey crop while the tardy fellow is waiting for his goods to arrive.

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Reared from our Superior Golden and 3-banded Italian stock. The cells are all built in very strong colonies. Our Queens produce bees that store from 150 pounds in Colorado to 256 pounds in N. Y. State, with but little swarming. Queens ready April 1st: Untested, $1.25 each; 6 for $6.00; 12 for $10. Tested, $1.50 each; Select Tested, $2 50; Breeders, $5.00.

Full colonies and Nuclei for sale.

Mr. F. M. Jones, of Lockport, N. Y., writes as follows about our Queens and Bees:

LOCKPORT, N. Y., Sept. 9, 1908.

MR. T. S. HALL, Jasper, Ga.

Dear Sir:—Your letter of the 2d received. I have taken only a part of the honey. The bees are gathering honey very fast. The most of the colonies are yellow as gold and very gentle. I think your Italians are very gentle. I bought 2 dozen from another breeder 1st of July. They are not as gentle as yours. You must remember, I had only 45 colonies of bees last spring—7 strong ones and 38 very weak ones that I would have lost if the cold weather had lasted two weeks longer. Some of them did not have bees enough to cover one frame, and yet their crop will be about 3 tons of white honey. I know you would like to know how I increased to 134 colonies. I had 2 of them swarm out, and I made 14 nuclei from them, and put your young queens with them. I had 5 swarms of black bees come to me and go in the empty hives about the 1st of June. After they had been in the hives 3 weeks I divided them into 20 nuclei and killed the black queens and put in 20 of your nice young Italian queens with them. The rest of the colonies I made by taking frames of hatching brood from the old colonies and putting them in empty hives. I could not have made that increase without the aid of all drawn-out combs ready for the bees. The strongest colonies had 5 stories to the hive, 8 frames each—40 frames all together; 8 frames of brood, 32 frames of honey, 8 lbs. of honey to the frame, 256 lbs. of white honey from the strongest colonies. They have 2500 pounds of honey on their hives now, Sept. 9th. Our Fair was last week. I got $38.50 in premiums on bees and honey; $5 for the best Italian queen.

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THE BUSY BEE MEN
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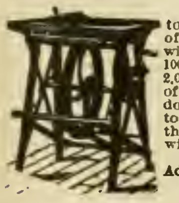

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter. 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives,etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. & JOHN BARNES, 995 Ruby St., Rockford, Ill.**

Baby Chicks 8 cts. each. Eggs for hatching. $1 per 100. All kinds poultry at lowest prices. Guarantee safe arrival anywhere. Write for price-list. 10A6t

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All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

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Have your orders for Bees and Queens booked now, as there will be a rush for stock this spring.

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10 Cases or over	40c per Case.
25 " " "	35c " "
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GUS DITTMER COMPANY,
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Honey and Beeswax

CHICAGO, Jan. 25.—There is quite a good demand for No. 1 to fancy comb honey at from 16@17c per pound, and very little of it on the market; the other grades are neglected and difficult to sell. Extracted clover and basswood are in good demand, with other white grades plentiful and easy in price. The range of the market is from 7@8½c. Beeswax is in good demand at 32c for prime yellow, with other grades about 2c less. R. A. BURNETT & CO.

INDIANAPOLIS, Jan. 25.—There is a good demand for best grades of both comb and extracted honey, but jobbing houses are well supplied. Practically no honey is now being offered by producers, and jobbers are selling No. 1 and fancy white comb at 17@18c. Best extracted, 9@10c, according to quantity taken at one shipment. Poor demand for amber honey and no established prices. Producers are being paid 29@31 for good average beeswax. WALTER S. POUDER.

DENVER, Jan. 25.—We quote our local market as follows: Strictly No. 1 white comb honey, per case of 24 sections, $3.50; No. 1, light amber, $3.25; No. 2, $3.00. White extracted, 7@8⅓c; light amber, 6¾@7½c. We pay 25c per pound for clean yellow beeswax delivered here.
THE COLO. HONEY-PRODUCERS' ASS'N.
F. Rauchfuss. Mgr.

BOSTON, Jan. 26.—Fancy white comb honey at 16@17c; No. 1, 15@16c. White, extracted, 8@9c; light amber, 7@8c; amber, 6@7c. Beeswax, 30@32c. BLAKE, LEE CO.

TOLEDO, Jan. 25.—The market on honey is rather quiet now, as is usual at this time of the year. Comb honey is moving very slowly and we are quoting as follows: Fancy white, 15@16½c; No. 1 white, 14@15½c; buckwheat, 13@15c, depending upon quality and grade. Very little demand for amber grades. Extracted white clover, 9@10c; white sage, 9c; Arizona white honey, 8½c. Beeswax is quite firm at 28@30c. Owing to the high prices this season, honey is not moving as rapidly as expected. Some producers have been inclined to hold their crops for exorbitant prices, and they are now offering them at much less, which has a tendency to drop the market some. We look for a better demand later on. THE GRIGGS BROS. CO.

CINCINNATI, Jan. 25.—The market on comb honey is almost bare. The demand is considerably lighter than it has been for the past few weeks. It is selling for about $3.50 per case of 24 sections. Amber honey in barrels is selling at 6¼@6½c; sage honey in 60-pound cans, 8½c. Beeswax fair at $33 per 100 pounds. These are our selling prices, not what we are paying.
C. H. W. WEBER & CO.

KANSAS CITY, MO., Jan. 25.—The receipts of both comb and extracted honey are light. We quote: No. 1 white comb, 24 sections to case, $3.50; No. 2 white and amber, $3.25 per case. Extracted, white per pound, 7½c. Beeswax, 25@30c.
C. C. CLEMONS PRODUCE CO.

ZANESVILLE, OHIO, Jan. 25.—There seems to be a slightly improved demand for honey, though there has not been complete recovery from the holiday slump. Very little, especially comb, is now being offered by producers. For No. 1 to fancy white comb producers should receive 14@15c, and for best white extracted 8@8½c, delivered here. Practically no sale for off-grades on this market. In a wholesale way, comb honey brings 2@2½c, and extracted 1@2c advance over these prices. For good clean beeswax, producers are offered 28c cash, 31c in trade.
EDMUND W. PEIRCE.

NEW YORK, Jan. 26—Comb honey fairly well cleaned up, especially No. 1 and fancy white stock, while there are gome off-grades still on the market. There is a fair demand for No. 1 and fancy white at 14@15c a pound; off grades 11@12c; buckwheat 10@12c, according to quality. We are now receiving new crop comb from Cuba, of very fine quality, which is selling at about the same prices as domestic. Extracted is in fair demand only, with sufficient supply of all kinds. We quote: California, water-white, 9c; white-sage, 8@8½c; light amber, 7½@8c; amber, 6½-@7c. Southern and West India, in barrels, 65@75c per gallon, according to quality. Beeswax steady at 30c per pound.
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State kind, how put up, and lowest cash price.
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WE HAVE on hand constantly a complete stock of Root's Goods, and can fill all orders promptly at factory prices. Send us your orders, and get goods as nearly perfect as possible. It is a matter of no little pride to us to be able to offer goods of such high character to our friends. Letters of commendation like the following are usual where orders are filled with Root's supplies:

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50TH YEAR

No. 3

Mass Agl College apr15
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GOLDEN JUBILEE YEAR

MARCH-1910

THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY

146 W. Superior Street, Chicago, Ill.

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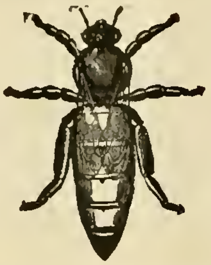

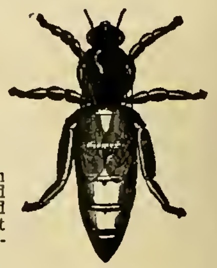

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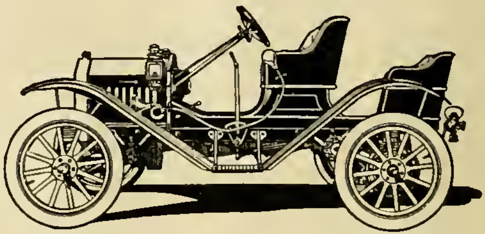

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FRANCE.—Paris, Raymond Gariel, 2ter de la Megisserie.
CUBA.—Havana, C. B. Stevens, 19 Officios.
ALABAMA.—Prairieville, Wm. D. Null.
COLORADO. Denver, Colorado Honey-Producers' Association, 1440 Market St.
COLORADO.—Loveland, R. C. Aikin.
COLORADO.—Grand Junction, Grand Junction Fruit-Growers' Association.
COLORADO.—Delta, Delta County Fruit-Growers' Association.
COLORADO.—Rocky Ford, Honey-Producers' Association.
COLORADO.—Montrose, Robert Halley.
COLORADO.—De Beque, Producers' Association.
ENGLAND.—Welwyn, E. H. Taylor.
GEORGIA.—Cordele, J. J. Wilder.
ILLINOIS.—Chicago, Arnd Honey & Bee-Supply Company, 148 West Superior St.
ILLINOIS.—Hamilton, Dadant & Sons.
IDAHO. Idaho Falls, Dr. J. E. Miller.
IDAHO.—Lorenzo, Alma Olson.
INDIANA.—Indianapolis, C. M. Scott & Co.
IOWA.—Davenport, Louis Hanssen's Son.
IOWA.—LeMars, Adam A. Clarke.
IOWA.—Emmetsburg, W. J. McCarty.
MICHIGAN.—Grand Rapids, A. G. Woodman Company.
MISSOURI.—Kansas City, C. E. Walker Mercantile Company, 312 Temple Block.
OHIO.—Peebles, W. H. Freeman.
OREGON. Portland, Chas. H. Lilly Company.
PENNSYLVANIA.—Troy, Chas. N. Greene.
TENNESSEE.- Memphis, Otto Schwill & Company.
TEXAS. San Antonio, Southwestern Bee Company.
UTAH.—Ogden, Fred Foulger & Sons.
WASHINGTON.- Seattle, Chas. H. Lilly Company.

AMERICAN BEE JOURNAL

L. L. LANGSTROTH
CHAS. DADANT

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GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., MARCH, 1910

Vol. L---No. 3

Editorial Notes and Comments

Blunder in Treating European Foul Brood

In Gleanings for 1905, where E. W. Alexander first gave to the public his treatment for European foul brood, he directs as follows:

> "Go to every diseased colony you have and build it up either by giving frames of maturing brood or uniting two or more until you have them fairly strong. After this, go over every one and remove the queen; then in 9 days go over them again, and be sure to destroy every maturing queen-cell, or virgin if any have hatched. Then go to your breeding-queen and take enough of her newly-hatched larvæ to rear enough queen-cells from to supply each one of your diseased queenless colonies with a ripe queen-cell or virgin just hatched. Those are to be introduced to your diseased colonies on the 20th day after you have removed their old queen, *and not one hour sooner*, for upon this very point your whole success depends; for your young queen must not commence to lay until 3 or 4 days after the last of the old brood is hatched, or 27 days from the time you remove the old queen."

Dr. Miller comments on the foregoing thus, from his own experience:

Four years later, when I came to try the cure, instead of going back and looking up carefully just what Mr. Alexander had said, I made the inexcusably stupid blunder of understanding that it was a *laying* instead of a *virgin* queen. So with no thought of departing materially from the Alexander treatment, I introduced a virgin 10 days after removing the queen, with the idea that she would begin laying at about the time I understood that Mr. Alexander gave a laying queen. The strange part of it is that no one called my attention to the blunder until late in January, 1910.

While I offer my humblest apologies for thus blundering, and for misrepresenting Mr. Alexander's treatment, I may be allowed to say that, after all, the blunder is hardly regrettable, upon the whole, *if* it shall turn out, upon further trial, that others find the cure reliable.

The treatment I used was certainly successful in most cases, and it is entirely possible that the cases of failure were because the subjects under treatment were not strong enough. For an essential part of treatment, as directed by Mr. Alexander, is to make the colonies strong. Please notice that it is not to have strong colonies, nor to make strong part of the colonies, but to *make* strong any colony that is to be treated; for it is doubtful if any colony badly affected is ever strong enough to be treated without being strengthened by the addition of brood or young bees, or both.

A comparison of the two methods will show that if the plan I used proves to be generally successful—always keep that "if" in mind—it has a very material advantage over the regular Alexander treatment. As compared with the regular Alexander plan, the period of queenlessness is cut exactly in two by the Miller plan—if I may be pardoned for thus naming it, not for the sake of taking away any credit due Mr. Alexander, but for the sake of brevity. For small credit is due me for any improvement that may have been made by sheer stupidity. Moreover, there is this notable difference: By the Alexander treatment the bees are *hopelessly* queenless for 11 days; never for an hour by the Miller treatment.

Cutting out 10 days of queenlessness, and relieving the bees of 11 days of listlessness when without hope of ever having a queen, with the possibility of laying workers upon the scene, and that in the midst of a harvest, ought to make no little difference in the work of the season; so much difference, indeed, that it may be well worth while to give the plan a fair trial. C. C. MILLER.

Drone-Laying Queens and Laying-Workers

When the work of egg-laying has gone wrong, and only drone-brood is found, one can tell pretty well by inspection of the combs whether it is a case of a drone-laying queen or of laying-workers. If there is a drone-laying queen, she seems unconscious that anything is wrong with her laying, and lays just as she would if all her eggs produced workers. The eggs are placed compactly in worker-cells, drone-cells generally being avoided, even if drone-cells are plenty. On the other hand, laying-workers make irregular work, skipping some cells and perhaps laying more than one egg in each of other cells. If drone-cells are within reach, they are preferred. The most reliable sign, however, is their preference for queen-cells. If you find a queen-cell with more than a single egg in it, you may be pretty certain it is the work of laying-workers. Sometimes you will find half a dozen or a dozen eggs in a queen-cell, some of them generally looking not plump but withered, and perhaps there may be several such queen-cells in the hive. You may be sure no queen was ever guilty of such work.

Distance for Pure Queen-Mating

F. W. L. Sladen says in the British Bee Journal:

> "I would not rely on isolation for pure mating anywhere in Britain, except on an isolated island. Supposing 3 miles were the limit of flight of queens and drones, one would have to ascertain by careful inquiry that no bees were kept within a radius of over 6 miles, and then one could not be sure that no colonies existed in hollow trees or in buildings, or that swarms might not settle in the district."

On the next page the editor goes still farther:

> "It would be difficult to prevent cross-breeding by removing the bees unless you can make sure that there are no other bees within 10 or 12 miles of you."

While there may be no *entire* security except at such distances, some think that the majority of matings occur between queens and drones whose respective homes are not more than a mile apart.

Comb Versus Extracted Honey

> "It seems to me that during the last few years many bee-keepers are given over entirely to producing extracted honey, and too little is being written on the subject of expertly running apiaries great and small for comb, quantity and quality. I would like to see the bee-papers classify their articles, and have a thorough department each time for comb, and one for extracted honey. We could then read and study all, but quickly consult, if we wished, the portion devoted to that we were chiefly interested in."—A CORRESPONDENT.

In some respects the interests of bee-keepers are the same everywhere, and in other respects their interests are quite diverse. It is natural and right that each one who subscribes for a bee-paper should desire to have his own interests fairly considered, and the man who is interested in comb honey alone does not care to read through an entire article only to find when through with the article that it is of interest only to the man who works for extracted honey. Especially in a crowded time it would be a convenience if the comb-honey producer could have a department to himself, and also the producer of extracted honey. But when it comes to putting such a plan into actual practice, it is not so easy as might be supposed. In reality, the number of articles that are of interest only to one or the other class of producers is very small, and it is to be feared that if all the other articles in any one number were to be assigned to one or the other departments the one who did the assigning would have a rather impossible task.

Take the January number of the American Bee Journal. About 88 percent of the items and articles are of equal interest to both classes of producers, and it would be impossible to say whether they should go under the head of production of comb or of extracted honey. Of the remaining matter, the bulk of it refers to bulk comb honey, and while this belongs to comb rather than extracted, still there is some extracted honey in the case. Only one article can fairly be said to belong exclusively to the extracted department, and although a larger number refer to comb than extracted, they are not entirely without interest to extracted men.

This leads to a question whether really more attention is given to extracted honey than to comb. Possibly the January number is exceptional, but the likelihood is that there are not lacking those who think comb honey gets the lion's share of attention.

The foregoing count is without reference to the Question-Box, which stands in a class by itself, there being no rejections, but all questions sent being answered, and these questions ought to show pretty clearly in what the questioners are interested. It so happens that only two of the letters could be assorted as belonging exclusively to one department, and they both belong in the comb-honey department.

On the whole, it is perhaps not practicable to do more than to indicate so far as may be by the heading, to which class an article belongs. This has generally been done, but it may do no harm to have it even more especially in mind hereafter.

Delayed Fertilization and Laying Workers

A bee-keeper reported in Praktischer Wegweiser a case in which a virgin began work as a drone-layer, and then when 6 weeks old began laying worker-eggs. From this he concluded that after she failed to be fertilized promptly she began laying drone-eggs, and after laying thus for a time she was then fertilized. Herr Dobbratz explains that a wrong conclusion was drawn from the facts. Under special circumstances fertilization may be long delayed. He has known cases in which virgins were still capable of fertilization when 6 weeks old. Only in the rarest cases will a virgin become a drone-layer under that age. If within his time one finds drone-brood present, and then later—say at the end of the 6 weeks—the queen turns out to be laying worker-eggs all right, it is a clear case that the drone-eggs were not laid by the queen. He and others have had cases in which workers laid eggs while a virgin or a queen-cell was present, and these laying-workers continued until the queen was fertilized and began laying.

Comb-Honey Production

Editor York;—Do you think it would be of sufficient interest to enough of those who read the American Bee Journal, to have an article by some suitable person telling how he handles his 'comb honey from the time it is taken off the hive until it is sold? In other words, how he cleans the sections, grades the honey, what kind of shipping-cases he uses, who buys the honey, etc.

Most of my honey is sold to people that come here to spend the summer, and I want to know how to prepare it in the best way for market.

The American Bee Journal is all right, and I value the articles by G. M. Doolittle enough to take it for those articles alone, even if there was nothing else.

Benzonia, Mich. John A. Van Deman.

This letter voices the desire of every ambitious beginner who desires to produce honey of the very best grade. The demand has been met more than once in the past, and will no doubt be met more than once in the future. But in the nature of the case it must be seen that if an article or a series of articles of the kind should be published each time a new member joins the American Bee Journal family, the repetition of such article or articles would be so frequent that there would be serious complaint of room thus used to crowd out fresher matter. Unless something at least partly new can be given, there is hardly justification for the publication of such articles. In reality, their place is rather in bee-books than bee-periodicals. The information desired by Mr. V. is amongst the fundamental matters in bee-keeping—matters that all bee-keepers are sure to need, and so are discussed in the text-books on bee-keeping.

As already said, the likelihood is that something will be given in the desired line whenever anything new is to be had, and in the meantime it may be mentioned that there are at least two books written especially to tell the whole story of the production of comb honey from beginning to end. They are "Forty Years Among the Bees," by Dr. C. C. Miller, and "A Year's Work in an Out-Apiary," by G. M. Doolittle. Our correspondent will find them exactly what he asks for, with such full details as could not so readily be given in the columns of a periodical. Dr. Miller's book is mailed for $1.00, or with the American Bee Journal for one year—both for $1.75; the Doolittle book is mailed for 50 cents, or with the American Bee Journal one year—both for $1.40.

Miscellan
News -

Our Front Page Pictures

The picture shown in the upper left-hand corner was sent us by F. Greiner, of Naples, N. Y. It shows his apiary after a heavy snow-storm; the snow being piled up on the hives, and hanging on the trees like so much cotton. It is a beautiful midwinter picture, we think.

The upper right-hand picture is a view of the apiary of Chas. T. Dennis, of Lake Preston, S. Dak. It was taken from the rear, and does not show the first rows. The hives on the right are "empties." Mr. Dennis reports having had good success with bees at his location, up to last year.

The large lower picture shows Mr. Wm. Stolley and his shed-apiary. On another page of this number will be found Mr. Stolley's report for last year, and also something about his experience in using bee-stings as a remedy for inflammatory rheumatism.

The hives shown on the top of Mr. Stolley's shed-apiary are decoys for catching stray swarms. We understand that he has caught quite a number of runaway swarms in those roof-hives. Mr. Stolley himself seems to be taking it easy in a rocking chair in the center of the picture, seemingly to be "monarch of all he surveys." Just now, he and his wife are spending a few weeks of the cold winter weather down in Florida, where he reports having a good time. Mr. Stolley is one of those jolly Germans one often meets in the wild and woolly West. We have had the pleasure of seeing him at one or two of the National conventions of bee-keepers.

Dr. Lyon's Lecture on Bees

Rev. D. Everett Lyon, Ph. D., of New York, delivered his illustrated lecture on "The Story of the Honey-Bee," before the Unity Club of Cincinnati, Feb. 13, 1910. Dr. Lyon is an enthusiast on bees, and while he fills his pulpit at home, he has traveled much to study bees and bee-keeping. His stereopticon slides are made from negatives of his own taking, and show most clearly the activities and habits of bees.

Mr. Fred W. Muth, who heard the lecture, and was instrumental in securing Dr. Lyon, has this to say about both Dr. L. and his bee-lecture:

> Dr. Lyon's lecture was everything that could be desired; in fact, we have heard lectures on this platform for 10 years, and

Dr. Lyon's delivery ranked among the first-class orators in every respect. The story of the honey-bee was never so well and enter-tainingly told as it was yesterday, by Dr. Lyon. He is on for several lectures in the East. I think it would be a wise thing for the National Bee-Keepers' Association to get Dr. Lyon to lecture on the honey-bee before Chautauqua assemblies, or on any other good lecture course. He would do the bee-keepers at large a wonderful amount of good, I think.

Dr, Lyon is a first-class man, and as an orator among the bee-keeping ranks I have not seen his equal. If ever a man made honey-eaters, or if ever a man made it plain about bee-keeping, it was Dr. Lyon in his lecture. It was worth a trip from Chicago to Cincinnati several times to listen to him, and quite a number of people who heard him say the same. FRED W, MUTH.

◆

Honey in Crane Cellular Cases

EDITOR YORK:—I notice on page 41, that in a sketch of my life, I am reported as receiving 5 cents a pound more for honey put up in my improved shipping-case, than otherwise. Now 5 cents a pound is a good deal—in fact, a great deal more than the facts warrant. Had you stated that we get 5 cents a case more when honey is packed in our improved cases, you would have stated the exact truth. We think 5 cents a case extra is pretty good, as they weigh only about one-half that of glass-and-wood cases. The saving in freight, with the extra 5 cents, half pays for the cases, which is worth looking after these days. J. E. CRANE.

Well, yes, that makes quite a difference, whether it is 5 cents a case or 5 cents a pound more for honey. We are glad to make the correction, as we do not wish to misrepresent in any particular in the American Bee Journal. The truth is good enough for us, and of course our readers want only that. But mistakes will occur in the best regulated families as well as offices.

◆

To Illinois Bee-Keepers

Some may have been overlooked in the sending out of 1200 blank petitions for a foul brood law, and if they will notify the Secretary, Jas. A. Stone, Route 4, Springfield, Ill., they will be supplied with proper blanks.

Also, if any in this State wish to become members of the Illinois State Bee-Keepers' Association, $1.00 will pay the annual fee and entitle to membership as well in the National Association for one year, and also a cloth-bound copy of the Ninth Annual Report, which will be published some time in March. It will embody the reports of the last conventions of the Illinois State, Chicago-Northwestern, and National Associations.

JAS. A. STONE, *Sec.*
Rt. 4, Springfield, Ill.

◆

A Japanese Bee-Paper

If Japanese bee-keepers do things wrong side foremost, as their bee-journal is printed, it must be a confusing business. This office is in receipt of "The Friend of Bee-Keepers," now in its second volume. Besides the name, there is an advertisement of queens in English, the rest being in hieroglyphics worse than Greek. A picture of Langstroth occupies a full page, and he appears to be in the English language. The last page is the first, the lines on the page run from top to bottom instead of from left to right, and even the numbers seem to be wrong end to, for 10 is written 01. Yet doubtless honey tastes just as sweet in Japanese as in plain English.

Important Questions on Honey-Dew

We have received the following from Dr. E. F. Phillips, In Charge of Apiculture, in the Bureau of Entomology, U. S., Department of Agriculture, Washington, D. C.:

DEAR MR. YORK:—Since honey-dew was so abundant in many parts of the Eastern United States during the past season, it would be well for the bee-keeping industry to know, if possible, what conditions brought this on. I should very much appreciate it if the readers of the American Bee Journal who had honey-dew last year would answer the following questions, and in addition give any facts which might help in solving this problem:

1. Was there any honey-flow from flowers?
2. Did bees work on honey-dew and flowers at the same time?
3. What was the average amount of honey-dew per colony?
4. On what kind of trees were the insects which produced the honey-dew?
5. Give dates showing the duration of the honey-dew yield.
6. Was much honey-dew used for winter stores?
7. Is the mortality of colonies up to the present date any greater than usual among your own and neighboring bees?
8. What information have you as to the extent of territory in which houey-dew was abundant?

Replies may be directed to the Bureau of Entomology, Washington, D. C.

Respectfully, E. F. PHILLIPS,
In Charge of Apiculture.

We hope all of our readers who can do so will send the answers promptly, as requested.

◆

The Michigan State Convention

This was held at Lansing, Mich., Feb. 23 and 24, 1910. There was a good attendance and an interesting meeting. We had the pleasure of being present, and enjoyed once more renewing acquaintances among our old Michigan friends, and making some new ones. The officers were re-elected for the ensuing year, as follows:

President—L. A. Aspinwall, of Jackson.

Vice-President—E. D. Townsend, of Remus.

Secretary-Treasurer—E. B. Tyrrell, of Detroit.

We expect to publish a brief report of the meeting next month.

The next annual meeting will be held at Grand Rapids, the date to be fixed by the Executive Committee.

◆

Editor Sick and 48 Pages

We had planned to have this number of the American Bee Journal out on time, but unfortunately, on returning from the Michigan convention, we were taken with an attack of the grippe, which bordered closely on pneumonia. This, with 16 extra pages, perhaps is sufficient explanation why this number is a few days late.

We aim to mail the Bee Journal from the 12th to the 15th of the month. If we closed the forms earlier in the month than we do, there would often be quite a loss on advertising, which we don't feel that we can afford. And as a bee-paper is not like a newspaper, it is not imperative that it be received exactly on a certain date. Its contents are not of the spoiling character; they will keep all right until used—read.

We are recovering slowly from our sickness, but whenever another convention is held in a place nearly as cold as a barn, *we* will simply ask to be excused from remaining, if we are there. We ought to have known better the last time. But it takes a long time to learn some things.

A Night at Dr. Miller's

It was our great privilege to be at the home of Dr. C. C. Miller, at Marengo, Ill., the night of Feb. 21, 1910 (our own birthday). As we remained all night we were there the morning of Washington's Birthday also. We found the Doctor and his family all very well indeed. The mother of Mrs. Miller and Miss Emma Wilson (who, as many know is also a member of Dr. Miller's family) was 91 years old, Feb. 15th. She is pretty well for one of her extreme age.

It is always an oasis in our own life to spend even a few hours with Dr. Miller and his beloved family. The Doctor will be 79 years old next June, but he doesn't seem to be a day older—in heart and many other ways—than he was when we first met him, some 25 years ago. May he live to be a hundred—"and then some."

◆

Clean Bee-Keepers in New York

According to J. E. Crane, New York bee-keepers are not badly sodden with whiskey and tobacco. He reports an interesting convention of New York bee-men at Albany, and says this in Gleanings:

> "And Prohibitionists seemed at the New York convention about as plentiful as bee-keepers. At any rate, Dr. Miller, or Pres. York, of the National Bee-Keepers' Association, would have felt quite at home; and, besides all this, it was quite a comfort to me when I got home not to have my wife tell me that I smelled of tobacco smoke."

If we were publishing a newspaper instead of a bee-paper, we would call for good reasons for boys and men to use tobacco. We have never heard a real good reason for its use, except perhaps as a poison or insect-killer. Sam Jones once said the reason he chewed tobacco was "to get the juice out!" But he must have had to chew the juice *in* before he could chew it *out*.

Gleanings had this paragraphic definition of tobacco in its Jan. 15th issue.

> "TOBACCO—A nauseating plant that is consumed by but two creatures—a large green worm and man. The worm doesn't know any better."—CALVIN MOON.

There doesn't seem to be any "Moon-shine" about that.

We hope that at least the boys and young men in the families of the readers of the American Bee Journal will be smarter than the "large green worm!"

◆

North Texas Convention

The North Texas Bee-Keepers' Convention will meet Wednesday and Thursday, April 6 and 7, 1910. All interested are cordially invited.

Blossom, Tex. W. H. WHITE, *Sec.*

Illinois Bee-Keepers, Take Notice

The blank petitions sent out by the secretary of the Illinois State Bee-Keepers' Association for a foul brood law, are to go before the 47th General Assembly, which does not meet till next winter (the present session is a special of the 46th Assembly).

These petitions were sent out at the time of sending the membership blanks, in order to save extra postage. But we advise getting them filled early, while there is no rush in work—and before they are forgotten.

The copy for our Ninth Annual Report is beginning to go to the printer, and we hope to get it finished by the last of March (depending upon how much the printer is rushed). We will also place the list of members and statistical report in the back of the Report, so it will include all the members who send in their $1.00 fee till the time the Report is finished. We will also name, in the end of the Ninth Annual Report, the senatorial district that leads in number of signatures sent in (or perhaps the highest 3, in order); and also the name of the three persons who send in the greatest number of signers. (N. B.—They must sign their own names). A list of names does not count—they must be *signers*. If you are not sure about the number of your senatorial district, never mind it, for we are getting so many that are wrong. We will go over the whole list and make corrections.

Our next Report will cost, with the postage for sending out, as nearly as I can estimate it at present, an even one hundred cents per copy. Those who do not get their names in pretty soon may have to take a paper-covered copy.

JAS. A. STONE, *Sec.*
Route 4, Springfield, Ill.

◆

California State Convention

We had the best attendance at the recent meeting of the California State Bee-Keepers' Association that we have had for years. We could not get through with our program, and more was accomplished than in many of the previous meetings. We assembled one day longer than usual.

We were honored with Eastern talent at our convention. Mr. Harrington, of Ohio; Mr. Coggshall, of New York; and other experts from New York and other States, were present.

We have not had a good rain for over two weeks, and the prospects are not bright for honey. If we do not soon have rain many colonies will have to be fed.

H. M. MENDLESON.
Ventura, Cal., Feb. 21.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Sweet Miss Honey-Bee

No one's makin' speeches
'Cept de honey-bee;
De principles she teaches
Sounds right sensible to me.
She says: "Keep lookin' fo' de sweets
Dat's growin' eb'rywhere,
An' if some no-count weeds you meets.
Pass on, an' don't you care."

As she comes a-bringin'
De goods f'um roun' de farm,
She says: "A little singin'
Ain gwineter to do no harm."
I tells you, lots of us would get
Mo' joy f'um life if we
Kep' follerin' de 'sample set
By sweet Miss Honey-Bee.

—*Washington Star.*

◆

"Honig-Lebkuchen"

Some time ago a friend in Germany sent me an excellent recipe for making honey-cakes, or "Honig-Lebkuchen," as the Germans call them. The cakes are so good that I thought perhaps the readers of the American Bee Journal would like a copy of the recipe, and I send it herewith as follows:

Take extracted honey one quart; sugar, 1½ lbs.; pastry flour, 3 lbs.; almonds chopped fine, ½ lb.; citron chopped fine, ½ lb.; candied orange peel chopped fine, ½ lb.; rinds of 2 lemons chopped fine; powdered cinnamon, 1¾ oz.; powdered cloves, ⅙ oz.; fruit-juice, 1 wine-glass full; baking soda 2 pinches.

In making the cakes, first make the honey hot, then put the sugar into it, then the finely chopped almonds, citron and orange or lemon peel. After this has cooled put two knife-points full of baking soda in it, then one wine-glass full of any kind of fruit-juice, and then mix in the flour. Mix everything light and careful, and roll out somewhat like thick ginger-cookies, and bake in a good, hot oven.

These cakes improve with age, and will keep any length of time. They should be made at least 3 or 4 weeks before the time desired for use. When first made they are hard, but after a while they are delicious.

In making they can be cut into squares or fancy figures or shapes. Before putting them in the oven they should be brushed with a syrup made from sugar and water. The oven must have a steady, even heat—neither too hot nor too cold. The pans in which they are baked should be buttered and dusted with a little flour before the cakes are put in for baking.

Many families accustomed to eating these cakes think they could not properly celebrate Thanksgiving or Christmas without them.

F. D. CLUM, M. D.
Cheviot, N. Y.

These honey-cakes are said to be quite an institution in the father-land, especially at fairs and on other public occasions, much as gingerbread is said to have been an institution formerly in parts of this country on training and election days. It is quite possible that some sister whose early days were spent in Germany will be vividly reminded of the past upon reading over the recipe so kindly sent by Dr. Clum.

◆

A Sister Tells How to Produce Chunk or Bulk-Comb Honey

I notice nearly every one is telling how to produce section and extracted honey, and now I want to tell how we produce "chunk," or rather, bulk honey, and its advantages over the other kinds.

As to hives, we have the shallow, 10-frame supers from top to bottom, and the Hoffman frame. We place 9 frames in each, and use no excluders.

"Why, the queen will go up into the supers and lay," you will say. Well, what if she does? So many more workers; and farther along I'll explain why it makes no difference to us.

The reason we prefer to place only 9 frames in the 10-frame supers all the way through, is because we believe that in the brood-chamber the young bees are somewhat larger and better, the cells being deeper, and in the supers the combs being thicker are more easily uncapped for extracting, and the bulk honey looks so much more appetizing in both jars and other vessels. The 9 frames are spaced so as to have the same distance from either side as between each and every frame, and so when filled are *all* uniform in size. The old way (or at least old to me) causes that side of the frame next to the super on either side to have no honey at all. There you have the equal to one unused frame anyhow, and with twice the manipulation and the rest of the frames of honey so very thin. Then the 9 spaced frames have an even surface, while the 10 tight-fitting frames are decidedly bulged and difficult to uncap.

When taking off the honey we remove each and every frame separately, shake off all the bees and remove to the honey-room. All those with brood are carefully uncapped and extracted, and then returned to the super nearest the brood-chamber, and if there are not enough to fill it, frames with combs are added; another super with 6 or 7 frames with starters, and 1 or 2 (as the case may be) frames of combs for baits. We like to use all combs when we have an ample supply. Frames with old combs, or rather combs that have been appropriated by her ladyship, are used either for running for extracted honey in the future, or used to help build up a weak neighbor, or placed in a hive when catching swarms, or in preventing swarming.

Now we will return to those in the honey-room. There we have light, dark and indifferent frames of solid honey and some extracted. The very whitest combs are cut out in slabs just wide enough to be placed in Mason jars, which are then filled up with white extracted, sealed, washed and dried, and an attractive label placed upon them. The dark and indifferent but tender ones are cut out in convenient squares, generally somewhat larger than the ordinary section, and placed in buckets, cans, pails—anything that is scrupulously clean and has a lid to it. Then we have recourse to the extractor, and each vessel is filled nearly to the top, the lid is put on, the vessel washed over, dried, and labeled. The frames, which should have but *very* little honey in them, if they have been cut closely, are washed off in a tub of water and hung out to dry. In odd times they are placed, a few at a time, in a warm oven with the door open, and when warm are easily scraped, the groove carefully cleaned out with an 8-penny nail, and starters secured in them with melted wax on one or both sides. The nail is bent up at the point the least little bit. You then grasp the whole nail, place the point in the top corner of the groove, and pull it down to the end. The nail acts as a plow, throwing the old wax to one side.

The honey in the 60-pound cans is sold to our customers who buy in large quantities, and the smaller ones to those who buy in small quantities, so that the honey in the large cans is never disturbed except by the consumer, and as our smallest vessels are baking-powder cans, we can supply our very poorest customers without getting sticky or tearing up the combs in the larger ones.

We hardly ever sell to grocers, preferring to sell direct to consumers, unless we exchange in trade. Customers either pay in cash what the vessels cost us, or give us a counterpart in exchange. In selling to the consumer we get the full value of our honey, and build up a name that could not otherwise be obtained. Many of our customers wait until we can come around, and buy of us rather than buy of the groceryman, or come all the way to our place and buy it out of the honey-room or from the hives. There are so many different caprices, some like what they call "warm" honey, some just like to see it taken from the hives, and, not a few, just for the sake of contrariness. But we like to please them all, regardless of inconvenience to us—a customer pleased is a customer forever.

The frames with very tough combs are extracted and placed in those new supers that I told you of, and used for baits, or reserved for further use as extracting combs. The uses for tough combs are legion. By this method there is no breaking down when extracting, plenty of extracted honey to fill up with, and all sells as extracted honey—10 cents a pound.

We *have* section supers, and these are put on when the flow is heavy, and the colony strong, when the bees enter them willingly. When the flow is light we get all the honey there is for them to get, whereas, if we had *only* sections, we would get half-filled or "thin" sections, and most likely none at all. The sections *do* bring a good price, of course, but then they are often hard to get, as they must be *full;* and then, there is no end of expense, trouble and worry with them, unless the flow is heavy enough to justify one.

The light weights and unfinished sections are cut out and placed in vessels with the bulk honey.

We have also a very few 8-frame hives, and in them we place the full 8, as they are not such a tight fit as the 10-frame super; and then, we like to have the little square sections, as some of our customers prefer them to the tall ones; the majority, though, prefer the tall ones (4x5). The thing is, to *please our customers* when we can possibly do so, without too much drawback to ourselves.

So you see that by running for bulk honey we are at all times ready to give them extracted or bulk comb, and, when conditions are right, section honey, too.

Some of our contemporaries will say that bulk honey is old-fashioned and slipshod, or slovenly; but, let me tell you, the old-fashioned way, in this instance, is more profitable and simple, and not slipshod or slovenly, because the comb is neatly cut (not torn, as in the old days), and the liquid honey is *extracted,* not strained through any old thing from brood-combs and "bee-bread" and what-not, with hands clean or otherwise.

The consumer gets a full pound every time, and for less money. The producer can care for more colonies with less help and less expense, and has a more certain crop, less loss of time, and far more profitable, in that one can sell 3 pounds of honey where only one could be sold before, when one runs for bulk honey. Just try this and advertise it as liberally as you would the sections, and see if it is not as I say.

One of the uses we have for tough combs is when catching swarms or making increase. To a very small swarm we give 3 combs in the center, and the rest frames with starters; the combs having pollen are very desirable. A medium swarm receives one comb of pollen, one of empty comb, and the rest of starters. When transferring, a strong colony gets starters only; a weak one gets empty combs, and combs with pollen, and sometimes with brood and honey. Increasing is conducted in the same manner.

By using the above method we have never lost a swarm or colony. Then when one places a full super of combs on top, don't you know one gets combs ready for extracting quickly.

Another use we have for tough combs is in keeping down swarming. We go to (say hive No. 1, which has only one 10-frame shallow super), and remove 5 frames—2 from one side and 3 from the other. We then replace them with 2 frames with starters on each side, then divide the 4 frames of brood that were left, and place a frame of comb in the center. On top of them we place a reserve super, and in it one frame of starters, one of comb; then the 5 which were removed from below, one of comb, and one of starters in succession as stated, then the cover. As a rule, we find 2 of the 5 with honey, which are extracted and others put in their places. We will now say that hive No. 2 has 2 shallow supers for a brood-chamber. We manipulate in the same way, and use the extra 5 in making increase, or give them to some weak colony that is not likely to have the tendency to swarm. The frames, of course, are free of bees.

I notice some seem to think we might extract "while the brood is in all stages" (notice Gleanings for Dec. 15, 1909, page 762-3); but not so. If the brood is not all capped those frames are not extracted, but left in the hive or given to a weak colony. And then, is it necessary to sling so vigorously?

And now allow me to congratulate Ye Editor on that splendid index that accompanied the December issue. Thank you very much for it. As I have saved all my year's numbers it is a great convenience to us. Also how pretty the covers are now. I, for one, don't mind the rise in subscription price.

Eola, Tex., Jan. 7. (MRS.) M. E. PRUITT.

The advantage of having 9 frames in a 10-frame super for bulk honey needs no argument; as to the brood-chamber, there may be differences of opinion. Are you sure that when more room is given the cells will be made any deeper, so long as the width remains the same? In the super there will be more honey with 9 frames than with 10 frames, but in the brood-chamber only 9-10 as much brood can be put in frames as in 10. But perhaps you find the advantage of having all combs interchangeable so as to be used either for the brood-chamber or the surplus apartment overbalances all disadvantages.

Most assuredly you are right as to extracting from frames containing unsealed brood. Whoever does that is taking a long step towards injuring the credit of extracted honey.

There is much discussion at present about bulk honey, and this very timely article will no doubt be of great interest to the bee-keeping sisters. Many thanks for such clear and explicit information.

Myrrh, Borax and Honey Mouth-Wash

Rub together ½ ounce each of pulverized borax and extracted honey, add gradually one pint of pure alcohol and one-half ounce each of gum myrrh and red saunders wood. Let the whole stand in a wide-mouthed bottle for two weeks. Shake the bottle occasionally. Pass through filtering paper. Add a few drops of water and use as a mouth-wash.—MME. QUI VIVE, in the Chicago Record-Herald.

Canadian
Beedom

Conducted by J. L. BYER, Mount Joy, Ont.

Honey Crop Pretty Well Sold

In a recent issue I commented on the extraordinary demand for honey during the present season, and up to the time of this writing the demand still continues. Before writing these notes today, my first duty was to answer some letters asking for honey, and I know of only one place to direct them to, and for all I know the person referred to may not have any left. This is unusual for this time of the year, particularly as some of the inquiries come from dealers who usually stock up in the fall heavy enough for the season's trade. Such a condition certainly augurs well for the sale of the crop this year, should we be fortunate enough to secure one.

Snow Protecting Alsike Clover

The steady winter already alluded to, with a nice covering of snow all over the clover since early in December, should insure good wintering of the alsike, the source of our main honey crop. I said *main* crop, but in so far as this immediate section is concerned, I might more truthfully say the *only* source of white honey, as, for some reason, white clover never amounts to anything around here.

What a Bee-Woman Can Do

Miss Wilson asked in her Department, in January, "Why can't we have more lady bee-keepers at our conventions?" A pertinent question, truly, when we consider how many *men* bee-keepers are indebted to their wives so much for whatever success they may have attained in their business. Of course this will hold true in any business, but it seems to the writer that the fact is more apparent with bee-keepers than any other class, as the more I come in contact with members of the craft the more I am impressed with the fact that an unusual number have such efficient helpers in their own homes. Indeed, we might just as pertinently ask, Why do not more lady bee-keepers write up their experiences for the bee-papers, for it looks as if in most cases the ladies are the *silent partners,* as we so seldom hear from them. Perhaps it may be because of the thought that the men say so much that the women get disgusted, and think that by writing they would but aggravate the offence! At least I am afraid that may be the case in our house, for although my good wife has been asked by the Editor of this Journal to write occasionally for Miss Wilson's Department, she steadfastly refuses, and says that I say enough for *both* of us;—although she did not say so, yet I rather suspect she would willingly change the word "enough" for "too much."

However, at the risk of getting my hair pulled, I am going to tell the readers of the American Bee Journal what one woman did last season in the way of wielding the uncapping-knife, even if it does mean the necessity of my apologizing for permitting her to have done so much heavy work.

To make a long story short, the woman in question, all by herself, uncapped, during the season of 1909, something over 30,000 pounds of honey; in fact, there was only one day that extracting was done that she was not present with us.

Now for the apology: Briefly stated, in the first place, she likes the work even if a steady day's uncapping does tire her a good deal; and, in the second place, it was impossible at the time to get helpers qualified to do the work, and she simply *insisted* on being present and having the work cleared up as fast as possible. However, if we should be blessed with a crop this coming season, I believe it will need more urgent excuses than the foregoing to allow me to let her do so much uncapping again, as I really believe the work is too heavy for any woman, when a good crop is to be handled. At the same time, I cannot but feel that the work of Mrs. Byer was, in the words of Mr. Scholl, "Not so bad for a woman;" and I wonder how many *men* did much better than that last season.

Divisible Style of Hives

Mr. Scholl's article on hives used by him for bulk comb honey, serves to arouse my interest again in the divisible style of hives. Not for the production of bulk-comb honey, though, but I see many points in their favor for the production of extracted honey, and, if starting all over again, I am not so sure but what I might adopt that style of hive entirely. As there is no likelihood of my having the privilege of starting all over again, there is not so much satisfaction in considering the question, so I will have to be content with the "contraptions" on hand for some time yet, at least.

Dr. Jones' Non-Swarming Method

I have been reading Dr. Jones' methods of preventing swarming, with feelings—well, I hardly know how to describe them. Dr. Jones is certainly a radical of the extreme type, ever to have thought of such a scheme. Really, I do not known whether to *try* the plan or not, as it seems so cruel and wasteful in the extreme. Of course, we cannot carry the sentimental too far in any business, but because of the repulsiveness, if for no other reason, I hardly think that the plan will be received with much enthusiasm.

This reminds me that there are, seemingly, restrictions as to just how far we may comment on the work, so perhaps I had better not commit myself too far in the matter, lest I repent for so doing.

Winter Everywhere—Bees All Right So Far

"Lots of rain, cold weather, *snow* and *ice* have made the outlook fine for a bountiful crop of honey." That is from Mr. Scholl, and he is talking about Texas, mind you—not of Canada, where we expect snow and ice every winter—in fact, would be disappointed if they failed to make their annual appearance. After this scribbler having had a longing to go to Texas or some other warm clime for the winter, such a declaration from the "man on the spot," certainly has a tendency to *cool off* such sentiments considerably. Judging from many reports to hand, the middle and south parts of the continent seem to be having a more than usually severe winter, while, on the contrary, we here in Ontario, are enjoying simply ideal winter weather. Of course, we have had cold weather—without that feature the weather here would be unseasonable—but all things considered, so far the season has been as nearly perfect as we can look for in this part of the globe.

If I am correct, we have had but 6 days so far (Feb. 16) that the thermometer has reached below the zero point; while, on the other hand, there has been scarcely warm enough weather to be called a real thaw. A pleasing feature has been the excellent sleighing ever since the middle of December, with an almost total lack of drifted roads so common with us since the timber has been cut down.

How are the bees progressing during this steady cool weather? A little too early to make a statement yet, but from all outside appearances the bees outdoors seem to be wintering fine. I have been in very few cellars, but the 40 colonies I have in a neighbor's cellar are not nearly so quiet as was the case last winter. The cellar in question is a damp location, and while it has always been on the cool side for wintering bees, yet, with a furnace in part of the basement, the bees have always wintered well. This winter the furnace was not started till Jan. 15, and although the weather was milder than during the same period last season, yet the thermometer registered about 4 degrees lower this year than last, and that factor may be the one that is making the difference in the actions of the bees. However, they may be all right, and it will not be long any more before the worst will be known in the matter, so I will console myself for the present with the knowledge that there are only 40 of the colonies in the cellar, anyway.

Reflections
of a

By W. A. PRYAL, Station E, Oakland, Cal.

Air-Ships for Out-Apiaries

A few days ago it was my good fortune to see the celebrated Mons Paulhan, the wonderful French "bird-man," gracefully navigating in mid-air at great speed a few miles south of San Francisco. His bi-plane traveled more evenly and with less discomfort to the rider than does any means of conveyance used on land or water, and the byways of the atmosphere were unobstructed. It has occurred to me that when this means of travel will be within the reach of the average person, one of the first who should make use of it would be the bee-keeper. What a pleasure it would be for him to soar away to his distant apiary over the mountains. Distance, time and obstacles of mountain-passes would be obliterated; the tediousness of travel would be reduced to a minimum.

The possibilities of the aeroplane in bee-keeping is great; who will be the first apiarist to make use of one?

High Prices for Honey

This looks well on paper; tariff tinkering may have made it better for the producers of vile, filthy honey, but nowhere do I notice that really fine honey is selling any higher during these troublous times of soaring food-prices than heretofore. And, perhaps, it is well that the product of the bee-hive is one of the fixed commodities, for more of it will be sold and greater will the demand become at a fair, remunerative price than if it were to be sold at the boosters' figures.

One reason, I suppose, that the price of honey has not taken to flying-machine prices is that it has not fallen into the hands of the so-called trusts. Some months ago I heard that a combination of men were going to unite all the large apiary interests in California, with a view of controlling the output of the bee-hives, and boost prices. It is likely that such a combination is not so easily brought about. For my part, I hope it will not be. The price of honey will largely have to be regulated by locality; the nearer such price is kept within the reach of the common people the better it is for the bee-keeper.

The Coming Season

Of course, it is far too early to predict that we are going to have a glorious honey-year. So far all indications point to a prosperous season. The rainfall has been bountiful; if the spring is propitious then will the coming crop be large. But we must remember that there is "many a slip," etc.

A Bee-Keeper's Utopia

From a gentleman in Bavaria, Germany, I received a letter asking about the conditions of bee-keeping in this State, that is so full of hopes and inspirations that I reproduce it here almost entire, as follows:

Dear Mr. Pryal:—I intend to go to America in about two months with the view of buying a small apiary with all the fixtures and the land needed. Of course, the location ought to be good, but need not be excellent, and be able to stand considerable increase without reducing the surplus per colony very considerably.

In selecting an apiary, if I had the choice I would consider the climate just as important as the sources of nectar. Not too hot, not too much wind, and a great deal of sunshine. The location would have to be so that I would have no trouble with the bee-keepers in the neighborhood, as soon as I would increase the number of colonies. In a new location I want to be distant enough so as not to infringe on prior rights. The conditions in California are so different from here that I cannot precisely say what I want, nor do I know what might be had. Are apiaries depending only upon wild sage invariably very isolated—no roads to them, a great Distance from habitations, etc.?

I would be greatly obliged to you if you would inform and advise me, so that I may succeed in finding a suitable location. I suppose that it is a difficult task, but that is no reason to desist from trying to find what I wish. I. A. H.

As this correspondent surmises, he has propounded a difficult task, one that would take many pages of this journal to deal with in a satisfactory manner. However, I shall briefly answer a few of his questions, and would refer the gentleman to articles and letters from various correspondents of the American Bee Journal in past issues, especially to what was said of Mr. Vernon Townsend's apiary and experience on page 213 of 1910.

The California bee-keeper does not find it so necessary to be near a sage-field now as formerly; these latter ranges are mostly in far-away places, among the hills and mountains, and the majority are almost inaccessible; but that does not hinder the sturdy apiarist from reaching them any more than it does the bees from flying over the hills, or winging their way against strong wind currents through mountain passes to get to the nectar-fields. One can find the most delightful climate within 25 miles or so of the seacoast; further inland one will find pretty hot conditions at times, though after one becomes acclimated the heat is rarely oppressive, except for a few days at certain periods of the summer. It is in the hot valleys that one usually finds the large areas devoted to alfalfa growing; here ideal locations are often found for apiaries.

I would advise any one seeking a good location in California to follow the course pursued by Mr. Townsend; go over the ground carefully and note results. This might be done in less time, and at less expense, than Mr. T. found necessary; his experience, as noted in the article mentioned, should be of immense value to any one seeking a bee-range in California. However, I would not undertake to advise any one locating in the same county Mr. Townsend selected; there are lots of other places just as good, and, perhaps, better. What would suit one individual might not suit the next.

Where Ignorance is Bliss; or Bees vs. Flowers

Mr. Thomas Chantry writes me from Price, Utah, of the thorny road he has to travel as a bee-keeper where he has located 4 car-loads of colonies of bees. His home is in Los Angeles county, this State, but he wanted to gather the vast sweetness that was going to waste in one of the rich alfalfa districts of Utah. It really seems that "he ran up against" more ignorance than one could possibly suppose existed in these enlightened United States. Possibly that is because he went where the light of intelligence has hardly penetrated up to this year of grace.

It seems that the denizens of the alfalfa region have gotten it into their thought-foundries—for it appears useless to say "brains" in this case—that the visits of bees to the alfalfa bloom rob the plants of their vitality; that the alfalfa becomes poor and useless for the purpose it is intended, to-wit: fodder for stock. Besides, I suppose the seed does not form in the seed-vessels.

Any child in the lower grades of a Missouri public school would be able to prove to those Utah alfalfa-growers that they are wrong; that, on the contrary, the bee is of great benefit to the alfalfa, and consequently to the farmer. This fact was made patent in a splendid article prepared by Prof. Coburn, and printed in his book on "Alfalfa," an extract of which I used in the January issue of this Journal. I might quote other instances, but it seems unnecessary.

Mr. Chantry may secure some valuble literature, I believe, bearing on this very subject, by writing to the National Bee-Keepers' Association. By all means turn the light upon those Utah farmers; they will be the better for it.

Bees as Soil Fertilizers

It has long been known that bees are among the most wonderful factors in the cross-fertilization of flowers, but it has not been so well known that these same insects also fertilize the soil so that we often have larger and better flowers. Did you ever stop to consider what becomes of the millions and millions of bees that are produced in a large apiary.

Years come and go, and during every day of those years for many months thereof, the mother-bee industriously toils on producing bees, for what? In the end, to die like all animated things, and like the rest of God's creatures, to be resolved again into dust. And in this dissolution of the bee lies a great fertilizer, greater than at first thought we are apt to consider her. One has but to notice the wonderful growth of vegetation in front of the colonies in the apiary to know how great a soil-fertilizer dead bees are. I have not studied this matter from the standpoint of a scientist, but simply as a casual observer. I feel that if it were tested in some of the Experiment Stations it would be found that the decaying carcass of a bee generates a germ (to put it that way) that is a great factor in soil-fertilization.

This much advanced, I drop the matter for others to try it out as they may see fit.

Acacia Mollissima—Mainly for Pollen

One of the glories of a California garden during the winter months is the beautiful Acacia mollissima. This is a tree from Australia or adjacent islands, I believe, and is thoroughly at home in this State. It is of a fairly rapid growth, of pleasing form and graceful, feathery foliage. The wood is hard, of splendid grain, and can be used for many purposes where a beautiful fine-grained wood that takes a splendid finish is required. I have seen specimens of these trees here over 60 feet high, and in the neighborhood of 2 feet in diameter. During January and February it is in blossom, and it is a common sight to see trees one mass of solid golden yellow—a sight that the eye fairly delights to feast upon. Its blossoms are eagerly sought after by the bees, mostly for pollen.

ACACIA.

Southern Beedom

Conducted by LOUIS H. SCHOLL, New Braunfels, Tex.

Bulk-Comb Honey—A Recapitulation and a Word of Warning

That bulk-comb honey will be more extensively produced in other parts of the country outside of Texas becomes apparent more and more, as indicated by the many letters regarding it that have come to me since the first article on this subject was written last October in the American Bee Journal. The interest in the subject is participated in by more of our bee-keepers than was first expected when the articles were begun, and it is very gratifying, indeed, to learn that so many are "taken" with the idea. While there has been an occasional one with an objection to this kind of honey-production, the great majority of the letters show a favor for a change from the production of the section-box honey to the very much more feasible, more economical, and more easy way of producing bulk-comb honey. More than this, dozens of letters show that there are numerous

1.—Original Home Apiary at Hunter, Tex.

2.—First Out Bee-Yard.

bee-keepers who have already sold bulk-comb honey in a small way, in some way or other, finding that it will work, that there can be worked up a trade for it, that there will be a demand for such a product if it is only introduced, and that there will be a bigger profit in it for the producer. And the latter is one of the *biggest* things a person could wish for in bee-keeping.

Right in line with the above I need only refer our readers to the article by Mr. Greiner, on page 13 of the January American Bee Journal. His article represents practically what has been written me by many others, by bee-keepers who have had the same kind of experience, and who favor bulk-comb honey. I should like to ask the reader to look up Mr. Greiner's article and read it over carefully, for he covers many good points in it. It will be noted how it would be possible for him easily to work up his trade in bulk-comb honey already begun. In fact, he already has the trade, and all he will have to do is to furnish the bulk-comb honey. There are thousands of others who can do exactly the same thing. And it will mean dollars and cents to them. It will help them to sell honey where they are not selling section honey today. It will help the bee-keepers all over the country to dispose of a far greater amount of honey, and a great deal of it right at home, thus keeping great quantities away from the glutted market. And is there any doubt about this not helping to increase the price of honey? Will it not help to lessen the bee-keeper's wail about the honey market, and the low prices for his honey? Will the production of comb honey—a honey that will be used by more of the masses, as it is in the reach of those who cannot afford section honey, and those who do not care for extracted honey—not result in a more even and wider distribution of honey, instead of it going in train-loads to markets that are only glutted because of this action on the part of the bee-keeper himself? We know this is so.

Right in this connection I wish to call the attention of the reader to a few points that will have to be considered in this matter of bulk-comb honey production in the North, and other places where it will be a new product, if its introduction is to be attempted.

The first of these is, not to go too fast. Remember that it may be a new thing to your customers; that they may not like such honey right at the start; and that a good deal of education *may* be necessary (?) before the people in your market will take to it readily. I have put a question mark above for the reason that here in Texas it has never been necessary for its producers to spend much effort toward educating the consumers for bulk-comb honey. They "took to it" right from the start; in fact, they took to buying it much more readily than did the most of the bee-keepers to producing it. In the latter respect, the bee-keepers of Texas of that time resembled the bee-keepers of the North at the present time. While some of them adopted the plan immediately, and profited by it, others lagged behind for a while, to see if it would work, and then they wondered afterward why they did not fall in line right away. But since there is a difference in localities, it will be well to give the matter a thorough trial in a small way at first, and then increase its production as the market takes to it.

Secondly, it will be well to remember that some education on the part of the bee-keeper himself is required in the new method, since it takes experience and knowledge on the part of the producer in producing a good article, putting it up attractively; and, lastly, but not least by any means, introducing it to his customers in the right way.

Summing up the whole, therefore, do not rush into this matter, but take plenty of time. Go slowly, and work into it if it will work in your locality, and then, as your increase in demand, and your increase in experience, grow, your business will naturally enough grow with them. The while that you are trying to introduce bulk-comb honey in a small way, keep right on producing the other kinds now produced by you, and if the new venture should fail, your loss will be very slight; and if the new way is successful, the change can be made gradually until an entire change seems advisable.

My succeeding articles will deal with each feature in rotation, so that I hope to help all who wish to try it this season. There is a great future for bulk-comb honey, but the change may be a gradual one for a year or two, to the advantage of the bee-keepers, perhaps.

Scholl Apiaries—Where Bulk-Comb Honey is Produced Exclusively

To give the readers an idea in what a great variety of looking apiaries bulk-comb honey production can be carried

3.—Out Bee-Yard—Mesquite Tree Shade.

12.—A Deep-Water Apiary in Texas.

5.—One of the Best Apiaries—Average 4 Supers.

6.—Another of the Best Apiaries.

on, the pictures of a dozen of the writer's apiaries will show. These are in as many different kinds of locations. There are now another dozen besides these, as the pictures show the apiaries of several years ago. They will number 26 the coming summer. Besides this, the apiaries look entirely different now from those in the pictures shown. There are no more weeds, and grass, and untrimmed trees. The hives have been overhauled and re-arranged. The bees, even, have been receiving an overhauling, in that the queens are being looked after and replaced wherever this is best, so that the stock itself is better than before. All this is done for one reason: To make more bulk-comb-honey production in my extensive apiaries the best, most economical, cheapest, and most profitable.

While some of the apiaries are located within a few miles of New Braunfels, Tex.—our operating center—others are scattered around many miles, so that some of them are 20 miles and more from home. Then there is a separate "string of apiaries" nearly 200 miles from here, in the rich valleys of the Brazos River, on the great cotton plantations, where cotton bulk-comb honey is produced exclusively. All of these are managed by one fellow (the writer), producing every year car-loads of bulk-comb honey. Could I do this with section? No, I could not, for I have, at one time, produced such on a small scale.

Here is a short description of the apiaries shown:

Fig. 1 shows my original home apiary at Hunter, Tex., where I grew up, and started bee-keeping nearly 20 years ago. The shade-trees are evergreen cedars or junipers, planted my myself. When still at home, the yard was kept as clean as a floor, but grass grew up during my absence later. The shade is not desirable; too dense. Here *only two kinds of honey were produced* for a number of years—*section honey and extracted*. And here, too, is where I learned to change to bulk-comb honey, in a jiffy, after I learned of it; in less than two seasons changing to bulk-comb honey production exclusively. This was 15 years ago.

In Fig. 2 is shown the first out yard 6 miles south, and two more (Figs. 3 and 4) still several miles further south, where hundreds of tons of bulk-comb honey have been produced since their establishment. Mesquite tree shade here is an ideal one for an apiary. It is not dense, gives a partial shade, and as it comes into leaf late in the spring, and sheds them early, the sun plays with the hives of bees both early and late in the day. Here the divisible brood-chamber hive, described in one of my articles, prevails, except in Fig. 4. This yard is now changed to that kind of hive, as are nearly all the yards now. By looking closely the shallow bulk-comb-honey supers will be seen on the hives. Fig. 4 shows full-depth bodies with extracting combs nearly filled with honey, and the bulk-comb-honey super given between it and the brood-chamber. This plan is used on all of our colonies, but shallow extracting supers are used, which are exactly the same as the bulk-comb supers. It is a method that has helped us to encourage brood-rearing at the same time, to keep down swarming and get more honey, and will be described fully later.

The best two apiaries are in Figs. 5 and 6. Their average a year ago was a little over 180 pounds of bulk-comb honey per colony, and 160 pounds the past year. Fig. 5 shows an average of 4 supers on all around in the early summer, and there were several with eight 30-pound supers on at the end of the season. One of these "sentinels," as I call them, was shown last month. A number of the colonies in them were produced in the two places nearest home, shown in Figs. 7 and 8, where the most of our increase is made during the season, and then moved out to yards where needed, or new ones established. Here all kinds of hives are brought into play, as we make it a practice to *make use of everything all the time*, if we possibly can, as it is just so much money lost if left lying around as idle capital. One of the secrets of success is, in my opinion, the constant turning over of the dollar that we have already invested, and "making it make more dollars" for us. We do this in these yards, as well as in other things.

The last four pictures show some yards nearly 200 miles away. Fig. 9 was just located when the picture was taken, and has no supers on as yet; while Fig. 10 has already received its first round. The other two, 11 and 12, "have legs." They are built crane-style, so that we can wade around in the water when we have those terrible —yes, "tearable"—floods in those river valleys. They have been in a half-dozen floods, sometimes with the water right up to the entrances of the hives.

7.—Where Most of the Increase is Made.

8.—Where Most of the Increase is Made.

9.—Just Located When Picture Was Taken.

10.—Received Its Fist Round of Supers.

But no matter what they have had to go through, the production of bulk-comb honey in these apiaries has made it a profitable venture, as it has been in all of our apiaries.

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Moving Bees With Open Hive-Entrances

I have clipped the following from the Dallas (Texas) Semi-Weekly News, and as it comes from one of our most experienced and extensive bee-keepers, I give it place here. I have always discouraged moving without closing the hives securely, and do this now, for the inexperienced, at least. But a move of 600 colonies in summer, as stated here, shows that under certain conditions it can be done successfully, at least, by experienced bee-keepers:

How to Move Bees.

How we moved 600 colonies of bees in summer and without closing the hives:

The bees were in three apiaries of about 200 colonies each, and three wagons with high sideboards were used in moving them. About 36 hives were put in each wagon.

We prepared the hives for moving by working them back to one-story hives. The brood and honey were placed in the lower story, and the top story, sometimes with honey in it, was set in a stack to be cleaned out by the bees. If there are many combs of honey they could of course be extracted or kept for feeding. Covers were then nailed, bottoms stapled on, and they were ready.

About sundown and a moonlight night was the time selected for moving. One man smoked each hive just before loading. The team was unhitched while loading. After wagons were loaded a thin cloth was spread over the wagon, and stray-chains unhooked to facilitate unhitching in case of accident. Arriving at the destination the horses were taken out, and we retired for the night.

At daybreak each wagon was well smoked and then unloaded. A. H. Knolle.

Sandia, Tex.

Fall Crop of Cotton as a Honey Plant

Last season (1908) was the best I have ever seen; this season was the worst. Up to Aug. 20, we had hardly rain sufficient to lay the dust. All crops, and even the weeds, failed to grow; but cotton will stand until frost; and if it gets rain in the fall it will grow fast. I believe the fall bloom will yield more nectar than it does at its usual blooming time, which is from May to July, as the long, hot days seem to dry up the secretions, and, as a general thing, there is an abundance of other bloom during those months in this locality, and it would be difficult to say that you had any real cotton honey.

But there is no mistake about it in the fall, for there is absolutely nothing else to work on. I have watched the bees at work on it for hours. During the last few days they do not seem to care much about the inside of the bloom, but prefer the nectar-glands at the base of the corolla, and outside also on the buds or "squares."—D. P. Hunt, in Gleanings.

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Shallow Hives

The following is a welcome letter:

Dear Sir:—I frequently notice that you advocate shallow hives, and also your plea for shallow frames—page 156 (1909). Well, I hope that you will have better success with teaching others than I have had so far. I have used the shallow hives for nearly 12 years (on recommendation of Mr. Stachelhausen, now deceased), and in spite of my securing much larger crops as heretofore, I cannot convince even my neighboring bee-keepers that shallow hives are "the thing!" What a convenience to have but one kind of hive and super for comb or extracted honey! Most California bee-keepers have about 2 or 3 different styles in their apiaries, and ever so many styles of supers.

I notice that the A. I. Root Company are advocating the shallow hives more and more, and I think it will be the coming hive all right.

I wish to thank you for your valuable articles in the bee-papers. I always read them with special interest. M. R. Kuehne.

Pomona, Calif.

Bee Keeping in Oklahoma

The young State of Oklahoma has a good word spoken of it as a bee-keeping State by two writers in Gleanings. W. F. Roller says:

> Conditions here are ideal for outdoor wintering. The hives are seldom moved from their summer stands, and double-walled hives and packing are not necessary. The severe cold spells of weather seldom last longer than two or three days. In nearly every week there are one or more days warm enough for the bees to take a good flight. These frequent flights enable them to stay contentedly in the hives, flying out only on days warm enough for them to get back without danger of getting chilled and lost.
>
> The critical period with us is the spring season, from early in March to about the middle of May. During the larger portion of this time the weather is cool, the winds are high, and though the flowers furnish only a small amount of nectar the bees seem unable to get what little there is. Brood-rearing continues throughout this period, and unless there is an abundance of winter stores left over or ample feeding resorted to, many colonies dwindle down to a mere nucleus or die from actual starvation.
>
> The summers are long and unusually favorable for the gathering of nectar. With three or four successive crops of alfalfa and many other nectar-bearing flowers, there is more or less of a light, continuous honey-flow from May to October. Foul brood and other bee-diseases are almost unknown here.

◆

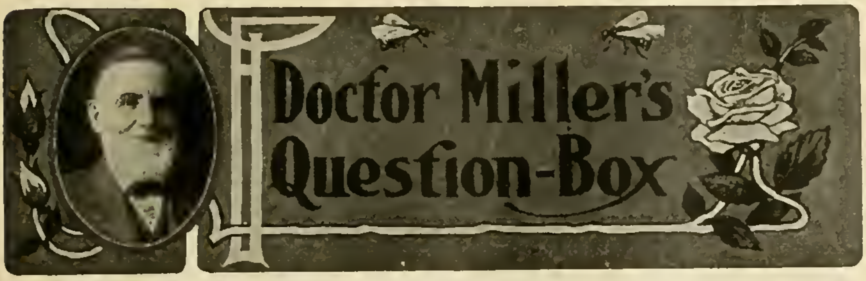
Meat and Honey

Wesley Foster says this, in Gleanings in Bee-Culture:

> I was never especially impressed with the combination of milk and honey, but good thick extracted honey of mild flavor spread over cold meat makes a morsel that is edible in the highest degree. It sweetens the meat without making one aware that it is honey that sweetens. Try it and see if I am wrong on the taste.

11.—"Baptist" Apiary—Up on Legs.

4.—Out Bee-Yard—Full-Depth Hive-Bodies.



Doctor Miller's Question-Box

Send Questions either to the office of the American Bee Journal or to
DR. C. C. MILLER, Marengo, Ill.
Dr. Miller does *not* answer Questions by mail.

National Bee-Keepers' Association

What is the use and advantage of belonging to the National Bee-Keepers' Association? WEST VIRGINIA.

ANSWER.—The thing that first started bee-keepers to uniting together was the fact that a Wisconsin bee-keeper, Mr. Freeborn, was prosecuted by a troublesome neighbor who kept sheep, and who charged that Mr. Freeborn's bees drove the sheep and injured the pasture. The expenses of the lawsuit were pretty heavy for one man to stand, and all bee-keepers were more or less interested, for if the suit went against Mr. Freeborn, and he had to pay damages, bee-keepers all over might be mulcted in the same way. So a number of us chipped in to help Mr. Freeborn, and from that grew a permanent organization, which with some changes of name, has continued ever since.

Prior to that time, in a good many instances bee-keepers had been obliged to give up bee-keeping or else to move their bees at the whim of some troublesome neighbor, but after this banding together they began to stand up for their rights, and the Association always stands ready to aid its members if trouble starts. In this way it stands as a sort of insurance company, for none of us knows what day he may get into trouble and need help.

It has also influenced public opinion by its deliverances, and by some effective advertising. If bee-keepers were all as wise as they should be, and all of them unite with the Association, there is no telling how much good might be done. Some think prices could be influenced to such an extent that the annual cost of membership would come back to the pockets of each member many times over.

The annual report that each member gets free of charge is valuable.

If you are awake to your best interests you will send a dollar to the General Manager, N. E. France, Platteville, Wis., and he will at once enroll you as a member; or send it to the office of the American Bee Journal if more convenient.

Moths in Hives—Bees Eating Holes in Combs

1. How can I best prevent moths from getting into my hives. Last summer they destroyed 4 for me—literally destroyed them. I laid it mostly to moths being more numerous than usual, there being much wet weather, and it seems there are many more in wet weather than in dry weather. In two days and nights last summer they destroyed one colony. I examined each of the hives every 2 or 3 days while so wet, after I saw that it was necessary to do it.

2. What makes one of my colonies eat holes in its comb? It is not that the bees have nothing to eat, for they have plenty, there being about half of the comb full of honey. They seem thrifty; that is, they seem healthy, and are strong. They have eaten holes through portions of the combs, and eaten the edges and corners off of other portions. I first thought that mice had made a nest with them, but on examination I do not find it so. KANSAS.

ANSWERS.—1. The moths are not so bad as you think they are. Wherever they are bad it's a pretty safe guess that the bee keeper himself has first been pretty bad in allowing more or less weak colonies in his yard. You went into each hive every 2 or 3 days, and doubtless you destroyed all the bee-moth larvæ, or wax-worms, that were large enough to be readily seen. You did well, and that's about all you can do directly to get rid of them. The indirect means are the most important. Don't allow pieces of comb or hives containing them to be standing about as breeding-places for the pests. Most important of all is to *keep all colonies strong.* Italians are almost moth-proof, ever so much better than blacks. Even a rather weak colony of Italians will keep the moth at bay. If you want to encourage the moths, leave a very weak colony of black bees in your yard. Then when their combs are riddled with the work of the moth, give them to a strong Italian colony, and see how soon they will be cleaned out.

2. I don't know without seeing. It may be that the bees have been digging out worms. It may be that the bees have been digging down the comb at a part where it is not in use, to be added to some part that they are using. Sometimes, indeed very often, it looks as if bees dug down their comb through sheer mischief. Especially if foundation is given at a time when no honey is coming in, you may count on their gnawing it more or less.

Best Clover for Bees—Kind of Brood Foundation—Best Bees

1. What kind of clover is the best for bees?

2. What kind of brood foundation should I use?

3. I am sending a few bees. What kind are they?

4. What kind of bees are the best? IOWA.

ANSWERS.—1. In Iowa, probably, all things considered, no clover is more valuable than the common white clover. Very likely you have that without any sowing. If you want to sow any besides, try sweet clover, both the white and yellow variety. It blooms later than white clover.

2. Perhaps "medium brood" will be as good as any for you; although "light brood" might do if well supported by wires or splints.

3. As nearly as I can make out from their mashed condition, I should think them hybrids, or blacks with some admixture of Italian blood.

4. You can probably do no better than to have Italians.

Moth Troubles—Italianizing

1. I have 6 hives of bees, the common black. The bee-moth destroyed 2 colonies. I did not know anything about the moth till one day I saw some dirt on the alighting-board, and looked in to see what was going on, and I discovered the moth. Everything was solid webbed in moths of all sizes. There is a woman about a mile away who keeps bees, so I went to her to see what to do. She said, "Burn sulphur, and set the hive over it; melt up the comb, and clean out the hive." I think I ought to have done it, as the moths, I believe, have gone into the other hives. The frames are all fastened together. They have never been handled like a regular bee-man would handle them. What can I do if the bees should be alive in the spring, to save what I have of the 4 colonies? Is there any way to keep the moth away by traps or any other device? My bees did not store any honey last year; possibly they have no queen, or a poor one.

2. If I bought an Italian nucleus with a queen, would they Italianize the blacks, or would the blacks "black" them? I have "Forty Years Among the Bees," but I have not found, as yet, what to do with the moth. NEW JERSEY.

ANSWERS.—1. See reply to Kansas.

2. If you get a nucleus with an Italian queen, and set it in a yard of black bees, and do nothing more than that, the nucleus, or the colony that grows from it, will continue to be Italian so long as that queen lives. When a young queen takes her place, the young queen will most likely meet a black drone, and her worker-progeny will be what are called "hybrids." At the same time some of the young queens in the black colonies may be fertilized by Italian drones, but the black blood will predominate largely. If you rear young queens from the Italian, introducing them into other colonies, you may soon have Italian blood predominating.

Moths in Bee-House—Trap for Swarming

I have 2 colonies of bees now. I lost 2 with moths.

1. I am going to place them in a building when taken from the cellar. Will moths bother them there?

2. As I have not time to be around at swarming time, I am going to put on the queen and drone trap. Will that be right? MINNESOTA.

ANSWERS.—1. The moths will trouble as much in a building as out of it. Read carefully the answer to "Kansas."

2. It will be all right if you give the proper attention afterward. But merely putting on a trap will not answer. The queen will be caught in it, and if you leave her there there will be a young queen in the hive in a week or so, and when she tries to fly out to be fertilized she will be caught in the trap, and then you will have a queenless colony. You will have to keep watch, and when the queen is caught in the trap make an artificial swarm, or dispose matters some other way.

Non-Swarming—Getting Increase

1. In the American Bee Journal for May, page 198, it gives an easy way to stop swarming, by putting the new swarm on the old stand, and the old swarm beside it; later move the old swarm about 10 feet away. Will they store just as much honey, or more, if this is done? or would they do better if left to swarm about 2 or 3 times?

2. In the July issue, page 220, it shows an easy way to increase. Do you think this is just as good as natural swarming? Would you increase that way? IOWA.

ANSWERS.—1. In your locality I think you would always get more honey by the plan mentioned than by allowing the bees to swarm at their own will. In a season not above the average, if a colony should swarm 2 or 3 times you would be likely to get no honey. By following the plan mentioned you might get a fair crop from the swarm.

2. The plan is given, not as a very good one, but as a very easy one. It is not as good as natural swarming, for you would not have as good queens, if there were no other objection. But if one could not be on hand to hive natural swarms, and one wanted to increase the easiest way, it might be used. No, I wouldn't use it myself. I would rather take a little more trouble and have a better way.

In "Forty Years Among the Bees" you will find some of the ways I use that are not so easy, but a good deal better.

Supers Partly Filled With Honey

1. I have about 20 supers about half filled with honey from last year. What can I do with them? I thought when I put them away they were all right to put on in the spring, but from studying bee-papers, that does not seem the thing to do.

2. What if I should put them on early, say as soon as bees are taken out of the cellar? IOWA.

ANSWERS.—1. I am in the dark as to whether section supers or extracting supers are meant. It makes a difference. In either case, the probability is that the honey in the supers is candied, and candied honey cannot be suffered in sections, although it might not be objected to in extracted honey. The honey should have been emptied out last fall by the bees, but it does no good to tell you that now. I'm only telling you for the future. Likely there are sections in the supers. Set 4 or 5 supers in a pile (not over any colony), and allow an entrance only large enough for a single bee at a time. Or, you may put 8 or 10 in a pile, with a small entrance at the top and another at the bottom. If you allow a large entrance, the bees will tear the combs to pieces. Leave them till the bees have cleaned them out and have practically stopped working on them. If you allow a large entrance, the bees will tear the combs to pieces. Leave them till the bees have cleaned them out and have practically stopped working on them. If you take them away sooner, it may start robbing if they are anywhere near the hives. They will not be so nice as fresh sections, or as if cleaned out in the fall, before candied, but they may do. Extracting combs may be cleaned out the same way, only you need not be so particular about small entrances unless the combs are new and tender.

2. Extracting combs may work all right that way; but there is too much danger that sections would not all be emptied.

Untested or Tested Queens.

Which is more profitable, to purchase untested queens at $1.00 each in June, or to get a tested queen for about $3.00 and increase from her stock?
Illinois.

Answer:—It depends something on the reliability of the testing, and upon your hurry for increase. If you can be sure the tested queen is superior, and are not in a hurry about increasing, take her. If the testing means that she is of the same stock as the 3 untested, only that her worker progeny shows she has mated all right, then take the three.

Comb-Foundation for Wired Frames.

Is it necessary to put in full sheets of foundation in wired Hoffman frames, or can I put in just half a sheet, or a third of a sheet (cut the other way) on each side, and a starter for the center? Will the bees finish up these frames, and which way is the best?
Saginaw.

Answer.—It is not absolutely necessary to put in full sheets. The bees will build out the combs if foundation is put in either way you mention, or even with a starter only half an inch deep. But I never felt I could afford to put in less than full sheets, for otherwise entirely too such drone-comb is likely to be built, and in the long run that is expensive business.

Granulated Honey in Hives in Winter—Why Did Bees Die?

1. My bees have had one flight since December 8, and that was January 19th. I examined them yesterday (Jan. 20), and found the combs that were not capped, full of granulated honey. What is the cause?

2. I further found 5 colonies dead with plenty of honey in the hives, the bees being all bunched in a pile and stuck fast in the combs. What is the cause?
Kentucky.

Answers.—1. The character of the honey may be to blame. It may have been gathered late, not ripened, and so left unsealed, when it would granulate. Some kinds of honey are worse than others in this respect. Then there may have been honey-dew.

2. Again, it may be the character of the honey, or honey-dew. That's the most likely guess; although sometimes bees starve with plenty in the hive, the cluster being at one side of the hive and the honey in the other, the honey in the cluster being used up and the weather too cold for the bees to leave the cluster to reach the honey in the combs.

Management for Much Honey and Little Increase.

I have 200 colonies of bees in 10-frame hives with movable combs. I run for both comb and extracted honey, using the strongest colonies for comb honey early in the season, and finishing up the season with extracted honey. I want to get all the honey I can and increase as little as I possibly can, next season. I use queen-excluders on all extracting hives. When queen-cells are started containing eggs or larvæ, I thought of killing the old queen, and in 8 days destroy all queen-cells but one, and give plenty of room for storing.

1. Will this young queen occupy the hive the balance of the season without swarming?

2. Is there danger of clogging the brood-nest with honey as the bees hatch out, so that the young queen will not have room?

3. Will the bees store as well after the old queen is removed?

4. Do you approve of this plan?
Minnesota.

Answers.—1. I think there would be no swarming before the next season.

2. The likelihood is that as fast as cells are left empty by emerging young bees they will be filled with honey. But when the young queen gets to laying they will be emptied for her.

3. I'm not sure whether they will from the time the old queen is removed until the young queen hatches, but as soon as the latter is out of her cell the bees will hustle.

4. That's the hardest of your questions. If you can be sure in every case that the young queen will get to laying, then I approve the plan emphatically. I think some might have trouble with swarms leaving when the young queens take their wedding-flight. You might not have that trouble. Of course, you need not be told that in killing queen-cells 8 days after removing the queen you might be too late if the larvæ were too far adanced. There is also the possibility that the only cell left might prove to contain a dead larva. Not much danger, but such a thing has happened. On the whole, you will probably do well to try the plan. For the extracting colonies you might try the Demaree plan. When the season has begun, but before swarming, put all the brood over the excluder, leaving the queen below, with empty combs or foundation.

Method of Swarm Prevention.

Did you follow the same method of swarm prevention in 1908 as you describe in your book? If any modifications, kindly state them. Can this plan be successfully carried out where a person has clover, buckwheat, and a fall flow? I run for comb honey.
Indiana.

Answer.—In 1908, the plan given on page 186 of "Forty Years Among the Bees" was modified in this way: Instead of putting several frames of foundation in the lower story, a comb containing the least amount of brood was left, or else from another colony a frame was obtained which contained very little brood and was mostly filled with pollen and honey. This frame was put in the lower story at one side, and next to it were put 2 empty frames—not even the sign of a starter in them. That was the only variation in the treatment. The object was to make sure the queen would not desert, for she would not leave this established comb as she might the empty foundation. The empty frames without any starter were to discourage building as much as possible.

In some cases a colony that showed advanced preparations for swarming had its queen killed or removed, and 10 days later, all cells being destroyed, the colony received a young queen that had been laying but a short time.

The plan here first mentioned is, I think, as safe against swarming as any that leaves the old queen with the colony; the second plan as safe as any I know of.

Either plan works here where there is clover and a fall flow, although there is no buckwheat. I should not feel afraid, however, that a buckwheat crop would make any trouble.

Wants More Dark Honey—Disinfect-infecting Hive-Tool.

1. I got honey from white clover, raspberry, sumach, etc., beginning about June 1, and lasting until about July 15. This honey is light and nice-looking. Then about August 1, the buckwheat begins to yield. Sometimes there is not much of a break between the light honey-flow and buckwheat flow. I always leave a super on during the slack time so bees do not forget that there is an upstairs to the hive, but the best I can do, I have some sections that don't get finished until the buckwheat opens, and then they are finished out with buckwheat, making two colors of honey in the same section, that does not look well, or sell well. In fact, everybody wants dark or buckwheat honey, and I have very few calls for light honey, and none at all for mixed. I run mostly for comb honey and sell it mostly by peddling with a wagon. I wish you would describe a plan by which I could get the bees to keep more of the light honey and give me lots of buckwheat honey, or some way to get nearly or quite all buckwheat instead of so much light and mixed honey. If I can not do this I would like, at least, to avoid the sections of two colors, if possible. If I could get some light honey mixed in with the dark gradually, so as not to give two colors, it might sell fairly well. However, I don't know.

2. If I get a hive-tool or anything used in bee-work in contact with foul brood, how can I disinfect it so that I am safe in using it to uncap healthy brood, or anything I might want to do with it? As you've had a good time fighting yours, I'll try to do likewise. It's European.
Pennsylvania.

Answers.—I'm afraid I can't help you very much. To turn the early honey into the buckwheat crop is beyond me, unless in the form of extracted honey. You could extract some of the early honey, or keep it in combs. After the buckwheat harvest closes, you could extract from the brood combs all the honey, which would be chiefly buckwheat, or if some white honey was present it would merely lighten the buckwheat a little. Then you could supply the bees for winter with the white honey you had saved. I doubt if it would pay.

But the thing you most dislike, the spotted sections, white honey in the center and filled with buckwheat, you certainly can avoid. You can take off all sections at the close of the white flow, let the bees rob out those partly filled and put them on again when the buckwheat flow begins. You say you leave a super on during the slack time "so bees do not forget that there is an upstairs to the hive." Well, the bees don't need anything of the kind to keep them from forgetting. I've tried it and I know. When the buckwheat flow begins they will start on those sections that have been robbed out just as promptly as if they had staid on the hive all the time.

Come to think of it, I don't see why you couldn't swap your white sections with some bee-keeper who has buckwheat but prefers white. Most bee-keepers prefer the white. A small advrtisement in a bee-paper ought to find some one with whom you could make a profitable trade.

Bee-Keeping as a Business.

1. Would you advise a young man to follow bee-keeping as a profession? I have 23 colonies at present, and like it very much.

2. What preparation would you advise? I have "A B C of Bee-Culture," and take two bee-papers. Would you advise working with an expert apiarist for a time?

3. I am 19 years old and have completed a preparatory course for college. Do you know of an agricultural college which has a course in bee-keeping connected with it? We have a first-class State Agricultural College, but it has no course in bee-keeping.
New York.

Answers.—1. I would hardly advise any one to enter upon bee-keeping as a life-work until he has become quite thoroughly acquainted with the business. He will then be able to decide the question for himself more satisfactorily than can any one else for him.

2. You seem to have a pretty good idea of what is to be done. Study and practise are the things needed, adding more books, attending conventions, and if you can work under the superintendence of a good bee-keeper, all the better.

3. Agricultural colleges with courses in bee-keeping are scarce, and I am sorry to say I can not now give a list of them. There was a fine course in Michigan, but I think it has gone into a decline since Prof. Cook left there and went to California, where I think he has started one. One has been established, I think, in the Ontario Agricultural College, at Guelph, Canada.

A Hive Question—Honey without Separators.

1. I would like to have your opinion of the hive I will describe. It is made of white pine lumber, 21 inches by 2 feet 2 inches. This is merely an outside shell. Inside is placed a brood-chamber with 10 frames. This allows space of about 4 inches all around the brood-chamber. As the brood-chamber is not deep the hive looks rather queer—a large affair with a small box inside is what it looks like. The sections during the summer are placed upon the brood-chamber and so tiered up. This is wholly a home-made hive, which I purchased of the wife of a successful bee-keeper in our town, after his death. I regret to say that I never spoke with him so I can not say whether the hive is valuable or not. On account of his death the bees were sold cheap, and I ventured to buy 3 colonies which was my start in the bee-business. I now have 7 colonies all hived in the same kind of hives,

(*Continued on page 97.*)

Contributed Articles

Disinfection of Foul-Broody Hives

BY D. M. MACDONALD.

The question, instead of being a negligible quantity, is one of primary importance. Before entering on the subject, let me make two short quotations showing the anomalous position the question of nomenclature has fallen into in Canada and the United States. You, as with us on this side, recognize a mild and a virulent type of foul brood. Which is which? Take this description of the so-called American type:

> "You might as well expect to cure American foul brood by throwing a cup of cold water in the grass in front of your hives as to expect to cure it by requeening, as I recommend for European foul brood."—ALEXANDER.

Now place alongside it this contradictory statement:

> "It seems to be of a particularly virulent type, and, unlike 'American' foul brood, it will go all through your apiary in a few weeks. With it we are almost entirely helpless."—BYER.

Mr. Alexander distinctly sets the American foul brood down as the virulent type: Mr. Byer emphatically takes the opposite side and describes this Black or European foul brood as of "a *particularly virulent type*." I don't recognize the names as appropriate, but I will waive that point at present. The principal consideration is that we have a disease insidious in its working; like the pestilence it walketh in darkness, and virulent in its distinctive power.

Now, Mr. McEvoy and his supporters, backed up by some of your Inspectors, and abetted by the editor of the Bee-Keepers' Review, declare that they work cures without disinfecting, and hence they reason illogically, because from a wrong premise, that disinfection is unnecessary. Get the disease, even the virulent type, at a certain stage, and you have to deal with *germs* only. A shaking and a renewal of the works may rid the hive of the seeds of contagion, particularly if the bees are made first to consume the infected honey they carried away in their sacs. Delay treatment, however, until these germs assume the *spore* stage, and complications at once arise. The vitality of a spore is almost incredible, and its reproductive powers almost fabulous. This once recognized, it will become apparent that spores left in or about the hive after lying dormant for a time, can easily be resuscitated when the cultural medium appears. We find in *one* type of Bacillus alvei, that this arises time and again. Hence our insistence on disinfection. We do not entirely rely on one, or even two, shakes (and I know many in America do not place implicit faith on even the latter), because we know that frequently the seeds of future disease are left to blossom into vile fruit.

It follows, therefore, that a little regard to sanitation will not only scotch the snake, but kill it. What bee-keeper, if he is at heart of the good and true type, would grudge a little toil if he is assured it is for his own and the bees' well-being. This is all we plead for, and our plea is, I think, a reasonable one. So we scorch the interior of a dirty hive, or otherwise disinfect it.

(In parenthesis might I say here that the absurd insinuation thrown by Editor Hurley at Editor Root, is wholly illogical. This process does not lessen the number of hives in an apiary, and so does not gain for his firm a single cent. Mr. Hurley should therefore withdraw from his untenable position.)

Another feature which should weigh with editors is the fact that their newspapers are not written for experts, inspectors, or even the giant bee-farmer, but for the average bee-keeper. It follows that what Messrs. Hutchinson, France, McEvoy, etc., might be trusted to do cannot be safely entrusted to the man in the street, and as a logical sequence editors should sink their own personal beliefs on a point over which so much hangs. You and the editor of the Review know that Tom, Dick, and Harry, all estimable men and keen bee-keepers, cannot be entrusted to perform expert work, such as he and you could do. Leave one spore and there lie the seeds of contagion; leave one foul-broody hive amongst a thousand, and you have still the disease.

So I plead for a thorough cleansing and disinfecting of *every* foul-broody hive. A spore is an almost infinitesimal atom, requiring a microscope for its detection, even by an expert. Who, then, can say where it may be present? My own idea is that even where it is presumably absent, the bee-keeper should act as if it *may* be present, and do his utmost to rid the hive of its presence. Hence I say, emphatically, DISINFECT!

Ballindalloch, Scotland.

Spring Stimulative Feeding.

BY G. A. BARBISCH.

In 1908 I practiced stimulative feeding on 8 colonies, but the results were not as expected. The colonies were not larger, nor did they swarm earlier than other years. The past season I experimented again. Out of 18 colonies that wintered perfectly I again stimulated 9 colonies, and as they had a good deal more honey than they needed—in fact, there was no room for the queen to lay eggs, having eaten but very little honey during their 5 months' confinement in the cellar—I extracted about 100 pounds, according to the Alexander plan. Nine colonies were left alone entirely. Now those latter colonies that were not stimulated cast large swarms first, and stored more surplus honey than those that were stimulated, so after this no more stimulative feeding for me. Seven colonies were prevented from swarming by cutting out all queen-cells every 6 days, giving plenty of room and wide and deep entrances like those that Dr. Miller recommends, and I tell you they were the bees that brought in the honey. In my opinion, colonies that do not swarm will give at least twice as much honey as those that swarm once give.

Clipping the queen's wing has its advantages as well as its disadvantages. Colony No. 14 swarmed first with a clipped queen. She was found at once and caged; the hives were changed or new ones put in their places, but the bees would not come back to the old hive, nor could they cluster, as the queen was not with them. They were all over the whole apiary, and finally after they flew for nearly half an hour I put a cage in the Manum swarm-catcher and set the catcher against a tree, when they immediately clustered and were hived as usual. For some reason or other they are more satisfied when they can cluster. It is natural for them.

Now this colony went to work at once and never swarmed out again, while 7 more colonies that swarmed with clipped queens came out two and three times, no matter whether I hived them on starters or full sheets of foundation, or gave them a frame of unsealed brood, it was all the same. Of course, we were always there to put the queens back again, but it is lots of work when they act that way. Now why did they do that? Will some experienced reader of the American Bee Journal give me some light on the above question? I had an idea because it was so tremendously hot during swarming time, and the swarms were so large, was one reason why they acted so strangely. To give an idea what the swarms did, let me tell the following:

Colony No. 10 swarmed at 9 o'clock, a.m. They were hived in a 10-frame hive, and in two days they had drawn out and filled 7 Langstroth frames with honey, and on the third day swarmed out again for the last time. One fine thing in favor of the clipped queen is, I never lose a swarm, while bee-keepers in this vicinity all around me lost from 2 to 6 swarms, letting the bees swarm naturally. In fact, I had quite a large swarm come to my apiary from a neighbor bee-keeper who lives within one-half mile of me. As he did not care for them, I united them with one of my colonies.

A short time ago I received 2 queens by mail. Both were introduced the same day to queenless colonies. One was accepted, but the other one, on opening the hive the third day, I found the bees balling her. I expected the queen to be half dead when I caged her again, but she seemed to be all right.

I put more candy in the cage, put the queen and cage back again, and two days afterward I found her majesty tearing down a capped queen-cell, and the bees assisting her. I cannot see how I had overlooked that cell, and that must have been the reason they did not accept her in the first place.

La Crescent, Minn.

Methods of Introducing Queens

BY DR. G. BOHRER.

On page 279 (1909), Mr. R. E. Hickok gives his experience in the introduction of a queen, by dusting both the queen and workers with flour. And being successful in this one case, he states that he will try it again. Please permit me to suggest to him that it will be well for him not to regard this method of introducing queens as at all reliable. However, in case a colony is, and has been, queenless for 10 days or from which to rear a queen, thus being confronted by certain destruction, 2 weeks, and no eggs or larvæ available and all this during a honey-flow, they are most likely to accept a fertile queen by simply turning her in among them at the entrance of the hive.

But I once knew a colony of Cyprians to ball and kill a fertile queen when they liberated her by eating the candy out of the cage in which she had been mailed. They belonged to one of my neighbors who brought them to me the day after they killed the queen referred to, and said to me that if I could do anything with them he would be glad to have me give them a queen. I happened to have a mismated Italian queen in a cage, and the next morning after he brought the colony to my apiary, I smoked and drummed them quite a bit, so as to induce them to fill themselves with honey from their stores, which will put bees in a condition rendering them harmless. That is, they will not assume the offensive, but will act solely on the defensive.

Please permit me to digress slightly, and say that it is by the foregoing process that bees are brought under control so that persons can enter a cage, and with bare hands and face handle them with apparent carelessness before large gatherings of people without receiving a sting, unless they are pinched or led to believe that they are to be hurt, in which event they will sting quickly.

While in this mood I turned the mismated queen loose on one of the frames set on end, and leaning against their hive. And so far as I could see, not one bee disturbed her, but, instead, she went where she pleased unmolested, and at once became mistress of the colony.

I have called attention to the foregoing case to show that even where a colony is hopelessly queenless they will not invariably accept a queen when introduced by the methods that are as a rule successful, in view of which I smoked and alarmed them so as to cause them to fill themselves with honey, which, in addition to their helpless condition, as to any means of securing a queen, I regarded as an additional means of putting them in an inoffensive mood, as far as such a condition was possible. And in the presence of all this I was still suspicious, and took the precaution of setting a frame on end against the hive in order that I might, by ocular observation, witness the moment in which they received the queen. And if they balled her I could at once dump them into a basin of water, which will cause them to let loose from a queen.

In fact, I do not regard any method of introducing queens, now in common use, as being invariably reliable, and, of late, when I give a queen to a strange colony I fix no definite time for her liberation. But I put her in a cage made of a piece of ordinary window-screen, wire-cloth, 4 inches square bent into a flattened cylinder with one end closed, by pressing the end of the cage perfectly flat, and closing the other end with a small piece of sponge slightly saturated with honey. Such a cage can be put down between the frames as near the center of the cluster as possible, leaving the end of the cage flush with the top-bars of the frames. Every day I take the cage out and note the conduct of the bees that adhere to it. If they cling to it as if bent upon the destruction of the queen, being unwilling to let go of the wire, it will be quite safe to conclude that they are not at all friendly to her. But if, on the contrary, they simply crawl over the cage, manifesting no feeling of anger, I feel pretty safe in testing the matter by liberating the queen on a frame of the bees, set on end against the side of the hive so that I can see the manner in which she is received, and if they do not bite at her, and prevent her from moving about over the comb as she wishes, I at once cage her again and leave her 24 to 48 hours longer, and then test the matter again, and so on from time to time until they do treat her friendly. I have been as long as 2 weeks in getting a colony to accept a queen. In the meantime, I look for and destroy all queen-cells that the bees start which requires careful and thorough inspection, for, if one is missed, and a young queen is hatched out failure is almost sure to result.

The first Italian queen I ever bought was in 1864, and was, as far as I know, the first Italian queen ever introduced in the State of Indiana. I had no experience in the introduction of queens, and was extremely fearful of failure; especially so on account of being chided for paying $10 for a queen. (A "bug" she was called, and a humbug at that, by some of my skeptical neighbors.) I got her from Mr. Langstroth, and adopted a plan of putting her at the head of a colony on what I called "the nucleus plan," by putting a frame of mature brood in an empty hive. All the bees were carefully brushed off so that not one old bee was left on the comb. A number of young bees were emerging from the cells every minute or two, and such bees I thought were not likely to attempt to hurt a queen, as they never knew any queen but the one I was giving them. I put a movable division-board in the hive by the side of this comb of brood, and closed the hive for 48 hours, so that not one bee could pass either out or in. I kept them where the maturing and unhatched bees would not get chilled.

I turned the queen with the bees tha came with her (about 50 in number, being shipped by express) into this hive when arranged as described, and at the end of two days I opened the entrance, and the few old bees began to fly out and in, and at once went to work. In a few hours I opened the hive and found several hundred young bees had emerged, and the queen had begun to lay eggs. In 3 days more I gave them another frame of brood, and in a short time had a good colony. This method will save a valuable queen without any risk of having her killed if properly managed.

Lyons, Kans.

Improvement Through Re-Queening

BY LEO E. GATELY.

Reasoning from effect to cause, it will be generally found that the unnatural difference in colonies in the same apiary can be traced almost invariably to a failing queen. As the slightest deterioration of the queen throws the colony into an abnormal condition, it is impossible to estimate the actual loss incurred by allowing colonies to queen themselves.

An important factor in the economics of honey-production is the improvement of our bees through the selection of breeding queens from colonies possessing the most desirable qualities, eventually bringing the entire apiary to a higher degree of permanent productiveness. The apiarist who pays scant attention to the improvement of his stock will soon find the very foundation of his business gradually sinking. Without systematic efforts in this respect, an apiary will deteriorate slowly but surely, and the process by which it can be built up is equally tedious.

To anticipate satisfactory results from breeding it is necessary to decide what points we are to breed toward. One race of bees must be selected, and our efforts confined to that race alone. A first cross may occasionally prove superior to either race of which it is composed, but such results are seldom permanent, and are made so only by a limitless course of thoughtful selection.

If judgment is exercised in selecting colonies for drones as well as for queens, Italians can soon be so bred that they will cap their product as white and neatly as average blacks. For increased yields, simply select colonies giving the highest pound average, and breed from them exclusively.

Reasoning from a false analogy, many suppose that the propensity for swarming can hardly be bred out of any race. In this instance we are endeavoring to eliminate an instinct, and greater time is required to accomplish appreciable results. We can, however, produce, without delay, bees less given to swarming than were there ancestors, by simply breeding from those that swarm least.

Honey-producers should learn to rear their own queens. If you are not passionately fond of this branch of your business, rear them in spite of yourself, until it becomes a habit. Once formed, the habit will be turned into a love for queen-rearing. In the average apiary the expense of requeening is about 5 cents per hive. It should never exceed 10 cents, and all for labor.

The expense of requeening an apiary is preponderantly overbalanced by having colonies of the same strain, and all queens of the same age. Uniformity of work is thus secured throughout the apiary, which saves an endless amount of head-work and annoying labor. In connection with a system of wintering fitted to the locality, it amounts to the elimination of spring overhauling.

With the number of colonies the honey-producer has from which to make a selection, there is little difficulty in finding a few especially adapted to cell-building. Or, we can, directly after the swarming season or harvest is ended, go through the colonies of an apiary and remove their old and debilitated queens. In four or five days we come along with a comb of larvæ from the choicest colony. Remove the larvæ from their two best cells, dipping into their places those of our own selection. Then destroy all cells except the best two. Further examination of colonies receiving such treatment is unnecessary, unless we wish to see if the young queens have begun laying.

Sebastian Co., Ark.

Report for Season of 1909—Bee-Stings and Rheumatism

BY WM. STOLLEY.

The season of 1909 was partly favorable, and party unfavorable, for bees in this section of the country. Up to the middle of July, everything went well, and from 30 colonies I secured 2,797 pounds of white extracted honey, of which 544 pounds were white clover, and the rest sweet clover, with an admixture of alfalfa honey.

After the month of July, drought stopped the flow of nectar entirely, and I had to feed 395 pounds of a mixture of honey and cane-sugar, viz.: 275 pounds of dark honey of the previous year, and 120 pounds of cane-sugar. By Nov. 1st all the bees were ready packed for winter, in all 38 colonies. I requeened about two-thirds of my colonies, and the rest have queens of the year 1908, all of my own rearing, and first-class, as far as I was able to test them.

We have had some very cold weather already, and also two heavy snows. The rainfall during the entire season was 17¾ inches.

The first light frost we had October 11th to 12th, but on Nov. 12th and 13th, we had the first real snowstorm; 4 degrees Fahr., above zero, and about 20 inches of snow on the level. From Nov. 16th until the end of the month we had fine, mild weather, and all the snow disappeared by Nov. 25, and the bees had several good flights. On Dec. 1, it again turned cold, and rain followed by snow kept coming right along until now.

December 5, 7, 8, and 9, were zero days, and at sunrise the thermometer registered 10 Fahr., below zero. We now have about 15 inches of snow on the level once more, and still the snow is falling.

I have kept bees now for 30 years, and have an accurate account of all expenditures as well as of the income of my little apiary. The following is a condensed statement of results:

During the 30 years I realized out of my bees $8,641.21. I paid out on account of them, $1,867.19; hence I have the amount of $6,774.02 for my labor; and, in addition to this, I have my little apiary, well equipped in every respect. But the money I got out of my bees, is by no means the best part of what I obtained by keeping them. My bees have been a source of great pleasure to me all these many years, pleasures such as the mere making of money never had for me.

BEE-STINGS FOR RHEUMATISM.

Besides this, *I know* that I have been greatly benefited by the effect of bee-stings received during all these years, when handling bees, as there is no doubt in my mind, that I would have been a sufferer from rheumatism without them. My mother was a great sufferer from rheumatism, and I believe that I inherited the inclination from her, to be afflicted likewise. But although I am now nearly 79 years old, I am, owing to the bee-stings received, entirely free from that terrible ailment; and what is more, I have relieved and cured many a sufferer from rheumatism for many years.

Now, it is no wonder that I noticed Dr. A. F. Bonney's article (page 300, of the September, 1909, issue), and when reading it I at once decided to pay to the Doctor my respects, as soon as time would permit me to do so.

After reading Dr. B.'s rather presumptive criticisms on the matter at issue, referring to Mr. Louis H. Scholl's standpoint (page 236, and the Doctor's subsequent letter to Mr. Scholl, page 365), I would refer to a case in point, published many years ago in the American Bee Journal, which, however, bears re-publishing, so as to enlarge the medical knowledge of the Doctor, and to set him to thinking, instead of asserting things.

The only question is, Will bee-stings cure rheumatism?

Dr. Bonney claims, that they will *not* cure, but I say, *they will in very many cases, that is, inflammatory rheumatism, and will always subdue and ease the pain.* Of very many cases, which in the course of 30 years, came under my personal observation, the following is as good as any:

A gentleman by the name of Geo. Loan, at that time the street commissioner of Grand Island, and still among the living, was suffering terribly from inflammatory rheumatism, at about 70 years of age.

For about 8 months Mr. Loan was confined most of the time, and several of our learned doctors were pumping medicines into the sufferer, and kept his legs well greased with their useless liniments; but in spite of all the doctors were able to do for him, the ailment got worse and worse. The children of Mr. Loan had heard of the "Stolley bee-sting cure," and they insisted on him giving the bee-stings a fair trial.

At last Mr. L., to please his children, consented to be taken to my farm. He was utterly unable to walk, and had to be lifted out of his carriage. The rheumatism had finally settled in one knee. The swelling was simply fearful, and the pain, as Mr. L. said, was terrible. He told me that he had not the least faith in the bee-sting cure. I told him that that would make no difference as to the effectiveness of stings, and that he would not be a cent out of pocket in trying it. So I gave my patient to begin with, 7 stings on his sore knee, and told him to call again a week later.

The next Sunday Mr. Loan was brought down to the farm again. He got out of his vehicle without help, and said, "Mr. Stolley, I begin to believe in your bee-stinging; the pain in my knee was almost gone before I got back to town, (1½ miles), and, you see, my swollen knee is shrinking some."

That day Mr. L. received 9 stings, and it was agreed upon that he should come again the next Sunday, when he was on hand promptly; he got out of his carriage, and walked almost without limping and said, "Your bee-stings have done wonders; why, now I want a whole lot of bee-stings." I objected to his request, but agreed that I would give him 15 stings. As it happened he received but thirteen stings, while two went into my own fingers.

Mr. L. was under orders to call again the Sunday following. During the week I did not hear how he was getting along, but went to town on Saturday, the day before he was to come out again to my farm. The physicians in the city, of course, heard of what was going on with Mr. Loan, and watched the case closely. So, when I got to town on that Saturday, one of the doctors, who had been dosing Mr. L. with medicine, and kept his legs greased, for 8 months, approached me thus: "Say, Stolley, have you heard of Loan?"

I answered, "No, I have heard nothing about him for a week."

"Why, Loan is dying; he has an awful fever. Look here, Stolley, if L. dies you can be held responsible for it. You have no right to practice medicine."

Now, while this conversation took place, I noticed Mr. Loan coming, walking as though nothing ailed him, along the street towards us, but the doctor could not see him, for the simple reason that he had no eyes behind, and talked right on.

So I knew my Mr. Loan was all right, and not dying, and I told the "learned" doctor that I always should insist that I had the constitutional right, in this free country, to give to sick people bee-stings, if they were in need of them, and asked me to apply them, in particular, since I was not charging anything for stings, time and trouble.

Meanwhile Mr. Loan had come up, right to where I talked with the doctor, who, being blind behind, was not aware of his presence.

At this juncture I lifted my hat, and gravely addressing the doctor, I said, "My dear colleague, Dr. E., I have the pleasure of introducing to you my patient, Mr. Loan;" and turning to Mr.

L., "Please tell the doctor what bee-stings have done for you." And he did tell the doctor:

"Why, doctor," Mr. L. said, "look here"—(and he threw out his former sore leg, and shaking it to demonstrate how nice and limber it was after the 3 weeks of bee-sting cure—"for 8 months you doctors kept me most of the time in bed, and in pain; you have filled my stomach with medicine, and almost ruined it; you have taken $200 out of my pocket for thus treating me, and only made my sick leg worse. *You are no doctors at all.* If you want to learn something about the cure of rheumatism, why, go down to Stolley's farm, where you can learn all about it."

Here I again politely lifted my hat and told the "learned" doctor, that it would give me great pleasure indeed to teach him how and where bee-stings should be applied, so as to add something practical to his lacking professional knowledge.

The foregoing is all I desire to say this time, as to the effectiveness of the bee-sting cure for inflammatory rheumatism.

And now I lift my hat to Dr. A. F. Bonney, and wish him a profitable New Year.

Grand Island, Neb., Dec. 10, 1909.

Something on Wintering Bees

BY F. GREINER.

Every year winter is still making inroads upon the stock of bees in many yards, and while a few bee-keepers are making the claim of never losing any bees during winter, the majority entertain at least some fear that the dreaded cold season may play havoc with them.

I have not had very heavy losses during a long term of years, but I am not so sure but what I may. The conditions vary so much from year to year. Early last spring I visited a bee-cellar of a friend. There were 275 colonies housed, and although the time was near to take them out, yet they were as still as mice. We were "poking" around among them for half an hour, tipping up a hive here and there, to get a better look at the beautiful yellow bees—yet none left their hives. They seemed to be in the most perfect condition. The year before the same lot of bees was very badly affected with dysentery, and many hives were still showing signs of having been badly spotted. In both years the bees had stored a nice crop of fine clover honey, and were practically handled in the same manner, yet there was this most marked difference in their wintering.

Another friend in my own town winters about 150 colonies in his house-cellar, and is quite successful. He always pries up the inner cover or honey-board, and raises it just a little, to allow a circulation of air. I prefer to give the needed ventilation in my bee-cellar only from the bottom of the hives. But he claims his bees would suffer from dampness if he did that. I judge there must be a difference in the conditions of our respective cellars.

In putting my bees into the cellar I aim to disturb them as little as possible. On the other hand, I have brought bees home from an out-yard, late in the fall, and, after jolting them over 15 miles of rough road, put them directly into the cellar, without noting any disastrous result. Generally, I make all the move in October, before the roads become bad. This is a good practice, because usually the bees have a chance to fly some before being housed, and, of course, the moving is done easier, and with greater comfort.

Locality is an important factor in wintering bees out-of-doors, and must be taken into consideration, although we may not understand wherein the difference lies, and, in that case, we have to be satisfied to find out by experience what is best in one, and what is suitable for the other.

One of my special friends, located in the other end of the county, concludes that it is detrimental to his bees to pack them early. He is using a sort of Quinby hive, which admits packing after the section supers are taken off. I rather prefer packing at an early date, fixing up things snug long before any snow comes. I have never known any bad results to come from this.

I still prefer upward ventilation through a thick chaff-cushion, for chaff-packed hives, and I am trying only a limited number each year under sealed covers. Other bee-keepers fare better by putting the packing on top of the sealed cover; in other words, they do not remove the inner cover or honey-board, and replace by a quilt, but leave it as the bees have sealed it after the surplus receptacle had been removed. Undoubtedly in some localities one plan works best; in another the opposite plan gives better results.

It is quite natural that some of us are looking for easier and cheaper methods to winter our bees. We find it cumbersome to have them in chaff. Cellar-wintering, on the other hand, requires a suitable repository, and it is no pleasant work to set the hives in, and out again later We have tried wrapping our hives in black paper, putting on a deep telescope cover, with paper or bagging under it, and various other plans, but we are not satisfied to have found that easy and safe way we were looking for. Some years our bees came out all right with all methods; in other years, again, all would fail more or less. And so we keep on experimenting.

Naples, N. Y., Jan. 28.

Bee-Keeping in Southern California

BY W. K. MORRISON.

The business of honey-production in Southern California labors under serious drawbacks. Two of these will be readily appreciated—low prices, and long hauls to market over rough roads. Why the prices of high-class honey should rule low when the consumer is paying high prices, is not so easily explained, but I will try to analyze the situation.

The market for San Diego County honey is chiefly in Hamburg, Germany. The price obtained there is probably about 10½ to 11 cents per pound, and the price in Liverpool, England, is about the same. The freight-rate is about one cent a pound, certainly not more than that, as the rate to Europe is less than to New York. Deducting dockage, etc., the net price ought to be about 9 cents, but the price obtained in San Diego is about 5½ cents per pound delivered. To the man who has his apiaries 40 or 50 miles from a railway station, over the roughest kind of a mountain road, this price is not encouraging.

As to who is responsible for this state of affairs, I shall not attempt to say, but let me point some of the causes of this condition.

First, the local market is poor, largely because of inferior methods of selling in the retail stores. A large percentage of the honey for local use is put up in Mason jars, for which the consumer is charged 10 cents in addition to the price of the honey. This deters many from buying at all. True, the grocer refunds the 10 cents, when the jar is returned, but, nevertheless, it is putting the case very mildly to say, that this is a very poor way to sell honey. I do not know of any other food product which requires a 10-cent package for 25 cents worth of goods. At present, butter sells for 40 cents a pound in San Diego, but the cost of the package does not exceed one-tenth of a cent. No doubt the butter-makers could use a glass butter-dish to place their butter in, but they don't do it. Why do bee-keepers do it?

There is a fine field in California for the cheap paper packages for honey, such as milk dealers use. I think paper bottles are made in Los Angeles, and possibly in San Francisco. In any event, I hope California bee-keepers will soon see the folly of using very expensive packages for honey. These are fine for *exhibiting* honey, and that is all.

As it is now, glucose by the carload comes here from Chicago overland, a distance of 2,500 miles, and is sold here at 6 cents per pound. In other words, the California people send their splendid honey to the East to be exchanged for glucose. They pay the freight both going and coming, and yet they say the people of the Pacific Coast are smart! I don't believe it. It seems to me it is the Chicago dealers who are smart. True, a large percentage of the honey goes to Hamburg, but they do not buy goods there. The money goes to Chicago to pay for the glucose, already bought. Wonderful business! California does a considerable trade on this basis. It trades fine olive oil for cotton-seed oil and cottolene, and so on. It is a grand thing for the dealers—and the railroads.

Very little is used by the baking trade in California—why, it is difficult to say. California used to be the banner wheat-exporting State, but now the biscuit business is controlled from St. Louis, Kansas City and Chicago. At present, one of the big trans-continental rail roads is out of commission, and will be for some months, but it seems to me it would be a good thing for California if some more of them were washed out by the floods for awhile, until the Coast people learn to stand alone.

As regards comb honey, the situation

is much the same. The California bee-keepers have not "caught on" to "canned" comb honey. Probably it is because it is a Southern idea, for most of the people here are from the North, and do not accept Southern ideas, not even prohibition.

It is my opinion there is a fine field for canned comb honey. The local market here for almost everything is good, and it is not at all difficult to introduce a new thing. Any way, it strikes me that a very large share of the honey produced in this State can be consumed at home at better prices than can be obtained abroad.

At present, the bee-keepers are poorly organized, or not organized at all, owing to the fact that they are so far apart; but the country is being rapidly opened up by means of good roads in addition to more railways, and it will soon be possible for all of them to get together occasionally and discuss ways and means for improving the industry.

It seems to me 2 cents, at least, could be added to the prevailing selling price of honey, and 5 cents to the price of beeswax. I see no reason why the price of good sage extracted honey cannot be raised to 10 or 12 cents, or the same figure that white clover honey will bring in the East. This can probably be best brought about by the canned comb honey idea, which would pave the way for better prices.

I have talked over this matter with several practical bee-keepers, but they cannot make themselves believe there is any profit in it. They have had it dinned so incessantly in their ears that "extracted" honey is the only product for them, that they cannot swallow the Texas principle without protest. I instance the fact that Dr. Miller and Mr. Doolittle both do without an extractor, yet they get good yields of honey. Still, they shake their heads. Many California bee-keepers could do without extra help in the apiary, if they could do away with the heavy labor of extracting the combs by centrifugal force.

By selling more honey locally, much heavy hauling long distances could be avoided. Many farmers here are good buyers, as they produce only one thing—wool, raisins, lemons, oranges, walnuts, etc. They even use the canned essence of the cow.

Good roads are going to help this section wonderfully. San Diego County recently voted bonds to the value of $1,250,000 to build new roads, or remake old ones. Los Angeles also voted some $5,000,000 for the same purpose, and the other counties will do equally well. This will make a fine beginning, and I note with pleasure that the money will be spent for the purpose the people voted it. Back in Ohio, I noted very much good money was being wasted on "good roads"; that is to say, the road-makers did not understand their business—politics was their business.

The roads here wind in and out and around mountain ranges, that are almost ideal for bee-keeping, but at present it takes a 4-horse team to do the work of one horse. Many a good bee-location is entirely neglected just for this reason. The day is not far distant when this will be changed, and the bee-keeper of Southern California will come into his own. At the same time, I doubt very much, if the same amount of honey exported will again equal some of the fat years of the past. The local consumption will leap up with bounds, and possibly none at all will be sold outside.

It is something of a shame, that the United States, and, more especially, that part of it known as the "Pacific Slope," should allow so rich a food product as sage honey to go to foreign markets to get a fair price. It looks as if the Germans had more food-sense than Americans. To my mind, it is a disgrace, and something ought to be done to remedy this disagreeable condition of affairs.

San Diego, Calif.

Bait-Sections Not So Important as Changed Conditions

BY RALPH P. FISHER.

Mr. Adrian Getaz gave a few very interesting remarks under the head of "Swarming and Other Topics," in the American Bee Journal for November, 1909, which I think can be substantiated only in part.

In my candid opinion, from past experience, results go to show that too much importance is given the matter of coaxing bees by the use of bait-combs in section-honey supers. This in due regard for any advantages found in their use, for we all know the importance of having the bees of surplus colonies early at work in the supers.

How to do this effectually has been a matter of no little concern, and, to the point of being satisfactory, bait-combs cannot fully commend themselves, though they are an aid to a certain end.

I wish to describe a manner of operating dilatory colonies, showing that changed conditions will produce results far more satisfactory than the continual use of baits.

With me, it became evident that these lingering colonies were the ones that swarmed, and that those which entered the supers without coaxing went through the season without a sign of this ever-existing drawback. Granting any possible exceptions to this rule, it is likewise true that such lingering colonies, after having been baited, will swarm out when the sections are not yet one-half completed. In this case the baits served only an end, but failed to pay the master for the time used in the care and preparation of the previous year's cull stock. Then, on the other hand, the fact that a colony was remarkably early at work in the supers after being baited, is no criterion, for very possibly that same colony would respond as quickly without baits. So often has this been the case that I feel safe in writing this, knowing other comb-honey producers are laboring with the same obstinate troubles.

Since arriving at the aforesaid conclusions, I began the practice of following the large-hive idea and adopted the 10-frame Langstroth, perfected a system of operation including the hive of new swarms in small hive-bodies. I was assured the earliness of section work is due, not to the direct influence of baits, but to the more remarkable condition of the brood-nest and natual propensity of the queen's progeny, more or less manifest from the source of nectar. Hiving these new swarms in small hive-bodies, with a super added, has the effect of immediate section work, with all the advantages favoring a full harvest. For hiving purposes I use a Danzenbaker 10-frame body with full sheets of comb foundation, allowing the bees this domicile throughout the surplus season, transferring in the fall to the standard 10-frame Langstroth hive-bodies. At this time, if the occasion requires, requeening is practiced, though in either case the method used in transferring is quite the same. I shake the bees from the Danzenbaker frames as in "shook" swarming, returning the combs to the hive-body, then place the whole over the Langstroth hive with an escape-board between. After a proper time has been allowed the transferred colony to get reconciled, the bees are encouraged to rob out their previously-gathered stores when they are made ready for winter on the summer stands.

I believe in large colonies, and consequently a large hive is needed in spring to permit of a prolific queen doing her utmost. The 8-frame Langstroth hive necessitates too much care and attention, often containing a surplus of last year's honey and pollen, preventing the queen's energy. With the 10-frame Langstroth this predominating feature is never a drawback, and it is easier to add than take from, in the event of too much dry comb, consequently this standard is preferred, since crop results are as satisfactory as when the 8-frame Langstroth hive is used exclusively.

From observation, it is also a simpler matter to know which of the colonies would need baits, and these are encouraged to swarm, as would be the case sooner or later, anyway, while the others are left alone, generally going through the season intact.

All this goes to show that there is more in changed conditions than with the trouble of depending on baits, in so so far as this locality has to do with the methods of production. Having a regard for others differently situated, it is desired that they consider these fundamental principles in lieu of bait-sections in supers, and see whether production isn't very largely increased. Because I find the foregoing a direct improvement is no criterion, still the hiving of new swarms in small hive-bodies for the season, must commend itself to comb-honey producers more favorably than other methods having less advantages. The labor connected with the transferring business is within itself a matter unworthy of consideration, as with large parent colonies, swarming never exceeds 20 percent, and many seasons as low as 5 percent.

Therefore my experience seeks support, and is given with a hope that at least some one can add a mite to this manner of getting dilatory bees in the supers early.

Vienna, N. J.

Sale of Bulk Comb Compared With Section Comb Honey

BY L. R. DOCKERY.

My experience in the production of junk, chunk, canned or bulk comb honey covers a period of the last 3 of 11 years which I have devoted to bee-keeping. From this experience, I, like most others who have marketed this kind of honey, learn that it pays best. The task of putting up bulk-comb honey is a very disagreeable one. It is a task I look forward to as drudgery, and look back on with relief. Also the method most generally used in packing is another disagreeable feature, and it seems that a more attractive method should be the rule.

I am making a specialty of bee-keeping, however, and have gained my livelihood in this way for the past several years, and expect to continue to do so in the years to come. However, in all vocations, as well as all lives, we have the thorns as well as the roses, and a great success is always attended with obstacles almost innumerable.

In the year 1907, I bought 200 colonies of bees at Socorro, N. M., which were in a miscellaneous lot of hives. Standard hives and supers were ordered in which to transfer them, but owing to the delay in delivering the goods, the honey-flow had been on some time before transferring was begun, and during this time the stronger colonies were building up rapidly. It was plainly apparent that they would be able to store a surplus, if the room was provided, and for this reason, the supers belonging to the original lot, which were not provided with frames, were put on, and the combs were built to the cover. This was done with the idea in mind that the honey thus secured could be sold as "strained," and the wax sold separately.

Out of this lot of hives something like 2,000 pounds of bulk comb-honey was obtained. After being cut out, this honey showed such fine color, and looked so well, that I decided to sell the whole lot as bulk-comb instead of "strained." But as all readers of the bee-papers know, New Mexico is a country where section comb-honey is produced almost exclusively, and the offering of this for sale seemed rather an uncertain undertaking. I was expecting to make a cross-country trip, however, and decided to take samples of this honey with me. This I did, and met with immediate success, for every merchant approached gave me his order, and almost all of them mailed second and third orders for this kind of honey. These orders continued to come in long after the 2,000 pounds had been disposed of. Some of the merchants that had sent in orders and failed to get them filled, asked for quotations when the next season opened. This I did, stating that I had no bulk-comb honey but could fill their orders with section comb; but strange as it may seem, not one order did I receive!

There was a slight difference in the price of the bulk comb and the section comb honey, on account of the fact that the section is a more expensive way of producing it. Until this time I did not realize that the ready sale for the bulk comb honey was accounted for by reason of its being put up this way, and I do not think the slight difference made in the price of the two kinds had anything to do with the slow sale of the section comb honey. I have seen many people, who, on seeing a section of comb honey the first time, declared it to be artificial, while no one seeing the comb in bulk will be suspicious of its purity. This may be one reason for the popularity of the bulk comb as compared with the section honey.

At the close of 1908, I sold out in New Mexico, and came to Texas. The man who purchased my interests there tells me, in a recent communication, that on account of the bungling work of an inexperienced bee-keeper in putting in foundation in frames, about 2,000 pounds of honey had to be sold as bulk comb, and that he found a very ready sale for it. Encouraged by this, he expects to abandon the use of sections, and devote all his time to the production of bulk-comb honey.

With these seeming successes of the sale of bulk-comb honey in a country where section comb is the rule, I am led to believe, that anywhere it is produced and offered for sale, a like success would be realized.

Goliad, Tex.

Black or European Foul Brood

BY G. M. DOOLITTLE.

It is with interest that I always read anything from the pen of Dr. C. C. Miller, but it was more than usual interest that held me while I read what he had to say on pages 394-5 of the December number of the American Bee Journal for 1909, regarding his experience with "European Foul Brood." The way he spread the disease by changing frames, took me back to the year 1872, when, during January of that year, I purchased some empty combs of a man whose bees had died over "the brimstone pit" the fall before, because he thought the colonies too weak in bees to winter. I noticed a few cells of capped brood scattered here and there in some of the combs, but then being a novice in bee-keeping, and not having known or heard anything of American foul brood, I fitted these combs into frames, and so during the summer, like Dr. Miller, "did my level best" to scatter and spread it throughout the whole apiary, by setting in those frames filled with combs one or two in different hives throughout the bee-yard. Before I got through with the job of curing a whole apiary during that fall and the next year, I became fully aware of what American foul brood is; and from the fall of 1873 to the present time I have not had a single cell containing that dreaded disease in either of my apiaries.

Time went on and as the year 1900 drew on apace I heard of a disease called "Black Brood" as being in the eastern part of this State, but from real, practical experience I knew nothing of what it was till about four years ago. However, away back in the latter eighties I ran across some brood in one of my hives that set me to trembling lest I had a case of the old trouble, yet it was not the old disease of 1872-3. I shut the hive and let the colony entirely alone for 4 weeks, as the colony was strong enough to defend itself from robber-bees. At the end of that time, just at night, I again opened this hive, and found no trace of anything wrong, the same as Dr. Miller tells of his No. 13.

For a whole year I kept everything about that colony separate from anything else in the apiary, for fear of some contagion, but as nothing more was seen of it this colony was used with the rest for any and all purposes. Time passed, and in the latter nineties I found one day, about the first of June, two colonies which had the same thing, only to a still worse extent. These colonies were closed for a month, the same as the one was ten years before, and on opening again, not a single cell was found that showed aught but perfect brood. Having the experience of the other before me, I paid no further attention to the matter. About two weeks later foul brood inspectors Stevens and Stewart, of this State, called on me, and examined several of my colonies. I took them purposely to these two colonies, although I told them nothing regarding what I knew of their past, only requesting them to be very particular in their examination, because if there was any disease amongst my bees I desired to know it.

They both pronounced all the colonies they had looked at as perfect, and on their going away, I asked them to describe black brood for me. As soon as they did this I knew that those two colonies, had (the first of June) what was known as black brood, and so I kept all that belonged to them separate for two years. At the end of two years, as nothing further came of the matter, I paid no more attention to these two hives, especially, as they, like Dr. Miller's No. 13, gave about the best results of any of my colonies.

Four years ago last spring, my partner, Mr. Clark, established a small out-apiary near the one I had, and, when winter approached, he put 11 of his colonies in the farmer's cellar with my 30, and moved 9 of his 20 colonies near a piece of woodland, where we had decided to locate all of the out-apiary bees the next spring. In this cellar, with our 41 colonies of bees, was stored about 5 tons of cabbage, which, owing to low prices, were allowed to remain all the time the bees were in the cellar, and when the bees were taken out, the stench from the cabbage was anything but pleasant to our nostrils, although the bees had apparently wintered perfectly. The latter part of May every one of Mr. Clark's 11 colonies wintered in this cellar, and 19 of out of my 30, had black brood, some of them being so bad that fully half of the brood was dead in the cells, while *not one* of the 9 colonies wintered outside showed any signs of the disease, nor did they that summer. At the time, we thought the cabbage had much to do with the matter, but at "this distance" I think it very doubtful.

Mr. Clark shook all of his diseased colonies on foundation, the same as Dr. Miller tells of doing, and as far as was seen that year, all thus shaken were prosperous. He asked me if I was not going to shake mine, and I told him I thought not, especially if he would risk matters with his colonies which were with mine, as our bees were out of "sight and hearing" of other colonies, in a secluded spot under the protection of this large piece of woodland. He said he did not care so long as he could hold the matter there where it was and not spread it among other bees. I doubled all the colonies which were likely to succumb, and succeeded in getting a fairly good crop of section honey from the whole, although the number was quite largely reduced by doubling. Dr. Miller tells us that he marked all colonies having from 1 to 20 diseased larvæ "bad," and all having more than this as "very bad." Those having from 1 to 20 cells with me were marked with an X; those having from 20 to 200, were marked with XX, while those having from 200 to nearly half the cells containing this diseased brood were marked XXX. Thus I could tell in the future all about what had been in any of these diseased colonies.

After the harvest of white honey was over, and the sections were removed, only 5 colonies showed any signs of the disease, and these 5 only a few cells; while all of Mr. Clark's, both those which he had shaken on foundation, and those not having the disease in the spring, were all right. Strange to say, only one of those showing sings of the disease at his time was marked XXX, two being marked X, so that those considered the worst in June did not so continue to the end of the honey harvest, as there were more at first of the XXX than of the others. All had normal quantity of bees for winter, together with necessary stores to carry them through. Owing to heavy winds, blowing in just in the right direction, the snow piled in very deeply around that part of the woodland where the bees were, so that the colonies became too warm, started brood-rearing and when spring opened the larger part of both Mr. Clark's and my own had succumbed, or were very weak, and spring-dwindled.

When June arrived I had only 3 colonies left, and of these one was marked with an X, one with XX, while the third was marked with XXX. On opening these hives not a trace of black or European foul brood could be found in either of these three colonies, while 2 of the colonies which Mr. Clark had shaken on foundation the year before showed the disease, one of them quite badly.

Mr. Stevens, the inspector for this locality, came around on his tour of inspection. After telling him all that had been done and what had not been done, he was requested to examine carefully the 3 hives marked with X, XX, XXX, especially this last, to see if he could find a single trace of any disease in that colony. He not only very carefully looked all the unsealed larvæ over, but he uncapped hundreds of those which were sealed, and after this rigid inspection he said he was compelled to pronounce each of the 3 colonies free from all disease. And they have shown no signs of the disease since.

Those of Mr. Clark's, having been shaken the previous year, but showing the disease again, were allowed to remain without further attention, and the out-apiary is today free from the disease, as far as can be discovered.

As this article is already too long, I will leave what I wish to say further for the next number of the American Bee Journal.

Borodino, N. Y.

3.---Bee-Talks for Beginners

BY JIMSON RAGWEED, OF INDIANA.

LATE FEEDING OF BEES.

MR. RAGWEED:—I have one colony of bees, very strong and much honey, but the honey is all sealed over. Our minister thinks they should be fed, and he gave me your name and address and has told me about your bees. During the warm days I fed them a spoonful of syrup, or what I could pour on the alighting-board without it dripping away, and they actually were very hungry; but since the weather is cool they refuse to eat more. How should I proceed? Perhaps this question is unusual, but I am a beginner, and any information will be thankfully received. I derive much pleasure in caring for my bees, especially since I am alone in the world.

Very truly,
MRS. SARAH B. GOOD.

DEAR MRS. GOOD:—I have your kind letter about your bees, and I take pleasure in replying. Your question is not unusual, but I think you have a wrong impression as to their need of more stores. Being strong in numbers and an abundance of sealed stores is a most excellent condition, and I think that no immediate attention is required. Feeding, when required, should be done inside the hive, so that no robber-bees can interfere, and the bees then deposit the syrup in the comb and consume it as required. By this mail I am sending a copy of a bee-paper, and I believe you would be much pleased with one of the bee-books which you will see advertised.

With kindest wishes,
JIMSON RAGWEED.

STIMULATIVE FEEDING IN SPRING.

DEAR UNCLE JIMSON:—Our bees did not do very well last season, but we will have an abundance of white clover this year, and pa wants me to write and ask your opinion about spring feeding, or what you call stimulative feeding.

You ask about Nathan. Yes, he still calls every Sunday and Wednesday evenings. Last Sunday evening he staid till 11 o'clock, and then ma rapped on the floor upstairs, and he went right home; but he came back Wednesday evening. Ma has just found out that Nathan smokes a pipe, and so I don't know just what we will do yet.

We all send our love to Thursea, Sam, and the twins.
ELSIE RAGWEED.

MY DEAR ELSIE:—Jimson has gone to Peru today to attend a swine-breeders' meeting, and I thought I would write you. About stimulative feeding, Jimson says he knows some good, progressive bee-men who practice the method, but after trying it repeatedly he does not believe in it. He says he gets best results by doing his feeding all in the fall, and then in the spring, about the time the bees get their first pollen, he goes through each hive, brushing off bottom-boards and placing outside combs, that contain most honey, next to the cluster. Such colonies for us build up faster than those which we have tried to stimulate. When we tried spring feeding for stimulating, it seemed that the bees were enticed to fly out, under the impression that flowers were secreting, and at every burst of sunshine they would start out, and such colonies suffered with spring dwindling, and just at the time of year when every bee counts.

We are all well except Eva. I pinned a red shawl around her and she and Steve went out in the yard to play, and our turkey gobbler attacked her. She is not hurt, but badly scared.

Your aunt,
THURSEA RAGWEED.

KEEPING SECTIONS CLEAN.

COUSIN JIMSON:—At the reunion Ci and I took a look at your comb honey in your bee-shed, and I want to ask you how to keep your sections so nice and clean. I have a lot of honey just as fine as yours, but the tops of my sections are fearfully stained. I use the very best hives and finest polished sections, and a heavy cloth over each super.

We are going to kill hogs next week. Can't you bring your family and come over? We had intended to butcher this week, but the moon will not be right till next week.

ARCHIE RAGWEED.

DEAR ARCHIE:—I think I understand why your sections are soiled. Some years ago all hives were constructed with no bee-space on frames or sections, but now all hives are supplied with a bee-space of about three-sixteenths of an inch, so that when we place the cover we do not kill the bees, and they can pass over one section to the other. With this bee-space neither propolis nor burcombs are deposited, and when you use the cloth you are spoiling the very feature that is valuable in your hives. In the old hives the cloth was essential, but it should be omitted now.

There is a new calf in our barn, and we can not very well come next week.

JIMSON RAGWEED.

(To be Continued)

How to Make Honey-Vinegar

BY C. P. DADANT.

I am going to make some honey-vinegar next summer, and would like to have you tell me how to make it.

1. Where would be the best place to keep the barrel in the summer, in the shade or in the hot sun?
2. Where would be the best place to keep it in winter, in the cellar or up-stairs? My cellar is damp in winter.
3. Do you put anything in the vinegar to make it stronger? If so, when would you put it in the barrel, after the water and honey are in the barrel?
4. What part water and what honey is best?
5. How long does it take the vinegar to form?
6. What temperature should it be to make it work well?

WISCONSIN.

I like to see the matter on which information is wanted put into the shape of questions, so these questions are very appropriate, for they indicate about what the average bee-keepers wants to know on the matter of vinegar-making.

I will, however, not follow the line they indicate, but will try to answer them while handling the subject from one end to the other. I have already, at different times, discussed this manufacture, but after seeing and tasting the different samples of vinegar exhibited at State Fairs in which I was judge—in Illinois, Kansas, etc.—I conclude that as yet, there are very few persons who succeed in making good vinegar out of honey. So this will probably be useful to many. My aim is to give the most simple method by which any apiarist may be able to make honey-vinegar without putting himself to any inconvenience, or making elaborate preparations.

Let me first say that I have not found it profitable to make honey-vinegar on an extensive scale. It could, no doubt, be sold at a handsome margin if sufficiently advertised. But each family uses so little of this condiment that the advertising of it must be carried on by firms who handle other merchandise of the same kind—spices, oil, tea, coffee. If we cannot make a special advertising plan, we must be content with a local sale among our neighbors, who, when they ascertain the high grade of our vinegar, will gladly pay us from 25 to 40 cents per gallon for it. Each apiarist can, in the course of a season, readily sell two or three barrels of it at least. If you give it special attention you may sell more. The main advantage of it is that you can in this manner dispose of a quantity of inferior honey at paying figures.

The first thing to bear in mind is, that in order to change a sweet article into acetic acid (the acid of vinegar,) it is necessary for that sweet to pass first through an alcoholic fermentation. Both the alcoholic and the acetic may be carried on at the same time, but the one must always have the precedence, and the more thorough this fermentation is, the more thorough will be the other. It is also necessary to know that if the amount of sweet is too great—great enough to produce more than 14 percent of alcohol in the liquid—the time will come when the alcohol produced will destroy all ferment, both alcoholic and acetic. In that case the honey-water would be sweet—alcoholic and acetic at the same time. This would make a poor article. It is therefore well to make the honey-water just sweet enough, and not too sweet. It is also well to give the alcoholic fermentation full headway before inducing the acetic to begin.

A pound and a half of honey in a gallon of rain-water is about the best proportion for vinegar. But if you were simply to mix the two, you might meet the conditions I struck at my first attempt. Mixing water with honey, in about the proper ratio, and knowing that plenty of air was needed, I put the mixture into earthen jars holding from 4 to 10 gallons each, and left it to take care of itself. I succeded in having only a decaying fermentation. My honey-water became *ropy* and insipid, and refused to sour. Ropiness is a disease of liquids, viscosity, which allows them to run in a thread, as a glutinous substance. My father, who was then living, and was better informed than I was, but had had no hand in this proceeding, asked me to read a little French treatise on the making of wine vinegar. Later I read several scientific descriptions of the manner of changing sweets into alcohol, and I readily perceived where I had failed.

The European scientists, especially the German and the French, have handled the question of honey-wines, honey-vinegar, and mead, in all their phases. This question of decaying honey-water has been explained by them. They tell us that in gathering the honey from the blossoms the bees also gather (mechanically and without purpose on their part) many different germs found on plants and in the air. So honey brought in from the fields contains all sorts of germs. It is for us to develop those germs which will serve our purpose if they thrive, and destroy the others or prevent their spread. The honey on which I failed did not contain any germs suitable to start the alcoholic fermentation. As to the acetic, its germs are so thoroughly scattered through the ambient atmosphere that it is usually not necessary to produce it artificially, but, as I said before, the alcoholic fermentation must precede the acetic; the germs of vinegar will not feed on sugar.

When you have decided on the quantity of vinegar you desire to make, you should secure good barrels. Iron-bound barrels are the best, provided they do not leak. If they were to leak you will remember that nothing rusts iron like vinegar, and in a little while the iron hoops would be eaten through. Wooden hoops are very good, but are more apt to get out of place. The barrels must be free from musty smell. An empty whisky-barrel or a syrup-barrel of good quality will do. A cider-barrel will do if it has not been allowed to remain open or unwashed after emptying. Perhaps it will be as well to say how to keep a barrel clean after emptying it.

After emptying a barrel which has contained either sweet cider, hard cider or claret, rinse it thoroughly with plenty of water. If residues or dregs stick to the bottom, you will readily remove them by taking an old piece of cistern pump chain and rolling the barrel about, after having inserted the chain through the bung-hole. To make it more easy to remove, tie the end of it to a string passing through the bung-hole. Then let the barrel drain dry, burn a little brimstone in it, and bung it tight; it will remain sweet until you are ready to use it again. For vinegar purposes, if the barrel is thoroughly dried, it will not get moldy or musty, even if not brimstoned. If the barrels used had a musty smell, when employed for vinegar, no decent housekeeper would accept any of it for a gift, let alone paying you a good price for it.

Select your honey; honey-dew will do as well as any. Use one and a half pounds for each gallon desired. Put it in a boiler and heat it to about 180 degrees, taking care not to scorch it, which would give it a molasses taste. This also would injure its sale, for the taste of caramel is very persistent. Mixing it with water will avoid burning. The heat is for the purpose of destroying all germs. Of course you may use it raw, and accidentally secure the alcoholic fermentation at once. In that case you take some chances. Once the alcoholic fermentation is started, however, there is little to be feared of anything else, and the vinegar fermentation will soon follow, if the air be not excluded.

If the honey used is unripe, it will take more of it for the same quantity of vinegar, since it is more aqueous. Diluted honey-water, secured by washing of cappings and of vessels having contained honey, and in which the proportion of honey is not exactly known, may be tested for this purpose, by the use of a fresh egg floating in the liquid. If the egg sinks, there is too little honey. The portion of its shell showing above the surface of the liquid should be about equal in size to a dime. A little more or a little less does not matter. Chas. F. Muth used only a pound of honey to the gallon of water; some persons use 2 pounds for the same measure. Half way between the two seems to me the best proportion for a good, strong article.

The temperature at which vinegar makes best is, according to some European authorities, about 86 degrees Fahr., or 30 C. But the exact temperature is not of importance, so that it does not fall below 70, especially during the first or vinous fermentation. To start the fermentation readily, the honey-water should be put warm into the barrels, somewhere below 100 degrees. Then add some fruit-juices that have not been boiled, grape-juice preferred. But cherry, raspberry, or other juices in considerable quantities will readily start the action, say a gallon or more to the barrel.

At first, if the weather be warm, there will be quite an effervescence brought about within two or three days, and the barrels would best be not quite full, say within 5 or 6 inches of the bung. The fermentation is very active when once started and if you left the barrel bunged you might have an explosion. In making claret, as we do not wish to allow vinegar fermentation, we protect the bung-holes of the casks with a sand-bag. An inexperienced man, in making claret, dropped the bungs into bung-holes of two large 600 gallon casks, thinking that the gas would lift them to escape. But the moisture formed over the liquid in the first few hours swelled the wood, the bungs held and the heads of those casks, 2 inches in thickness, were warped out until the liquid could make its escape. So be sure that the barrel is open. If you are after vinegar, plenty of air will be acceptable, and the acetic fermentation may begin very shortly after the other. A very fine brass or tin strainer, such as they use on milk-pails, will keep out flies and gnats, which are readily attracted. Ordinary wire-screen is too coarse, and, besides, would at once deteriorate from the gases which escape.

(To be Continued.)

Planning for the Coming Bee-Season

BY J. C. FRANK.

The season of the year is here when plans for the coming summer should be well matured. A large part of the success of the season depends upon the planning, and thought given to it. While it is true that no amount of planning can make up for poor execution, it is also true that the most diligent efforts can not atone for lack of forethought. Planning for the coming season should be done in the light of knowledge of previous years, and that gained by observation of the work of others. The one mistake that is found among bee-keepers everywhere is the failure to study the work of the past, and profit thereby.

In every locality there are outstanding successes and outstanding failures. These may be of a single crop, or they may extend to all branches of apicultural work. There could not be this variation when conditions as to nectar-producing plants, etc., are similar, without some reason. Why has one failed and another succeeded? Have you ever taken the trouble to solve the problems thus presented in your own experience, and that of your neighboring bee-keepers? If not, you have been missing one of the most valuable sources of practical information.

Sometimes the reason *why* is not so easily determined, but in most cases the thinking man can find it, and when he has learned to hunt for these hidden treasures, and then uses them in his apiary, puts them into practice, he is in a fair way to achieve the success every man prizes. The writer has seen men in what were called poor localities achieve better results than their neighboring bee-keepers with much better conditions. The one had given thought and energy to his work; the other had not. The fact is, that too many of us have never learned to think and reason. We have accepted the traditions and customs handed down to us without questioning their value, or determining the reasons for their use. They may suit our conditions, or they may not, and until we know we cannot keep bees intelligently.

The bee-keeper should be the greatest reasoner on earth. He has every condition favorable for the development of reasoning powers. He is breathing the pure, fresh air continually, is furnished with an abundance of healthful exercises, and has before him, always, problems for his solution, changing a hundred times every day to meet constantly changing conditions. No need to go into one of the so-called professions to develop the mind; the opportunity is before him continually.

Why, then, is the ordinary bee-keepers not a reasoner? Because he works by rote rather than by reason. If a bee-keeper moves into a new locality and follows methods in advance of his fellow bee-keepers, he will be watched closely, and, if he succeeds, his methods will gradually become the common practice of the neighborhood. His neighbor bee-keepers borrow his methods, or often unconsciously slip into them. Bee-keepers by rote, they have adopted the practices of the successful one without caring to find out *why* they are superior to their own. They have cheated themselves out of the mental development they might have had, and have degenerated into mere imitators, instead of workers and investigators.

These criticisms do not hold true of all bee-keepers, but of too large a percentage of them. There are men in every community who are thinking, reasoning, and investigating men, and are of inestimable value to their neighboring bee-keepers, and to apicultural work everywhere. All honor to them. But there should be more of them.

Dodge City, Kans.

Bees and Horticulture

Read before the Missouri Horticultural Society

BY M. E. DARBY.

State Inspector of Apiaries for Missouri.

A delightful combination; rich in nature study; full of practical and scientific research and moral teachings. In their life and habits, their relationship and mutual dependence, the one upon the other, we find a most beautiful and useful lesson in the harmony of nature—one which holds us in wonder and amazement, while we consider the marvelous provision in nature for the accomplishing of good results and the prevention of waste. Here we find the one getting its food supply from the other, out of a product—honey and pollen—that would otherwise be wasted; and, while so doing, is unwittingly performing a service that means the perpetuation of the species of the other. Hence we find that the profusion of nectar-bearing flowers, which are so generously produced all over the country, in cultivated orchards, fields, pastures and gardens, to be absolutely necessary for the well-being of the bees. While, on the other hand, the bees and other insects are a necessity to the fertilization of the flowers, and the production of seed for the perpetuation of their kind.

To enable the uninformed to better understand this relationship, let us briefly notice the construction of the flower, the arrangement of its parts, the functions performed; then the means for its pollenization, and the special adaptation of the honey-bee to this work.

The flower, which is but a special development of the leaf growth, is peculiarly arranged in itself for some special purpose; and those modified leaves are converted into special parts or organs to accomplish this prearranged purpose, viz., reproduction. For this end, these modified members are developed into two sets of organs, beautifully and systematically arranged.

1st. The outer or floral envelope, consisting of the calyx and corolla, which serve for protection and attraction.

2d. The inner or essential organs, consisting of the stamens and pistils. The functions that these perform bear a true resemblance to sex in the animal kingdom. The stamens, or male organs, the anthers of which are the principal parts, these contain the pollen-grains or fertilizing element. When the anthers are ripe they burst open and the pollen-grains are ready to be transferred to the receptive surface of the stigma.

The pistils, or female organs, consist of the ovary or seed-receptacle, containing the ovules, the style and stigma. The stigma is the upper portion of the pistil, which when ripe presents a viscid surface which receives the fertilizing element from the stamens. These essential organs may be contained in the same flower, or they may be in different flowers, and on different plants or trees.

The Fertilization of the Flower

In most plants there is a prepotency to foreign pollen; in others, the flowers are absolutely sterile to their own pollen; in others the essential organs come to maturity at separate times; still others have the stamens in one flower and the pistils in another. This shows a wise provision in nature to prevent self-fertilization. Here we see the wisdom in the forces back of nature in providing the tempting sweets to entice insect visitors. Darwin summed this subject up by saying: "Nature abhors perpetual self-fertilization."

To accomplish perfect pollenization of flowers, so that a generous crop of seed or fruit may be secured, some animate or inanimate agencies must largely be depended upon to perform this service. In some plants and trees the pollen is of a dry or powdery nature, and produced in great abundance, so that the wind or inanimate agency does the important work. But in many cultivated fruits, the pollen produced is more of a sticky nature, and not produced so abundantly, and not so easily carried by the wind, making it necessary for some animate agencies, such as bees and other insects, to perform the greater part of this service. To induce insects to visit the flowers and perform this mission, nature placed a tiny drop of nectar, which is suitable for insect food, in the bottom of the flower in such a manner that, to obtain it, the insect must come in contact with the essential organs as it goes from flower to flower getting its food. Here the bees render a very valuable service to mankind, as pollen distributors—a service that we do not appreciate as we should, for the reason of our inability to measure the exact amount of service rendered, and, further, there are no established wages for a bee's day's work, whether it be organized or unorganized labor. Yet the bee knows full well what reward it will get, or what the penalty will be, if it "knocks off" and "goes on a strike," while the golden grains of pollen and silver drops of nectar are evaporating and wasting in a field that will be fruitless.

The bee is especially adapted to the work of distributing pollen, by being provided with a long, flexible tongue for lapping up the tempting sweets secreted in the nectaries of the flowers; its hind legs are provided with a pair of pollen-baskets, in which it carries great pellets of pollen to its hive, to be used in the preparation of food for the larval bees; its body is covered with a number of fine hairs or bristles, which gather the pollen-grains as the bee goes from flower to flower in search of pollen and honey.

While the bee is busy in gathering its precious loads to carry home to its hive, it is incidentally carrying the ripe pollen-grains from one flower to another, and brushing them on the receptive stigma; thus performing an act, as it were, of "touching the button" and sending the current of life down into the baby fruits, fertilizing the ovules, and causing the development of seed and fruit. Improper pollination results in a failure of fruit to set, or in its dropping before ripening. It has been asserted by those who have made the subject a careful study, that the work done by bees in pollen distribution is worth more to humanity than the crop of honey produced.

A majority of our fruits are evidences of the bees' good work. A large number of them have come as chance seedlings, being a product of varieties then existing, mixed in the bloom by the bees; the ripened seed thus produced being dropped in some out-of-the-way place where it germinated and grew, having its struggles for life and sustenance, until it's beautiful, tempting fruit brought it into favor with man. It was then cultivated with care, and new plants started from it by some system of propagation, such as budding, grafting, layering or cuttings, whereby this valuable fruit may be produced with certainty, and be of use to man. It is sometimes very difficult to trace up these valuable chance seedlings, and place the credit for their existence where it properly belongs, and it should be mentioned here, and I do it with pleasure, that all the new and valuable varieties of fruits, vegetables and flowers, are not the product of wind and insects.

While nature may seem slow and somewhat reluctant in divulging her secrets, yet to him who has proven himself capable and worthy, by years of patient toil, much thought, and careful investigation, she delivers the keys that unlock her hidden forces. As subjects worthy of special mention in this noble work, we have a few horticultural giants, such as Bailey, Burbank, and others, who have gotten close enough to the heart of Nature to obtain that key which has enabled them to accomplish such great good all along the line of horticulture. Many new and choice fruits, vegetables and flowers are the products of their skillful hands. When these new productions are propagated in sufficient numbers, and set in commercial orchards, we find the majority of them require the visits of the bee to "brush life into their baby fruits," just the same as others.

So man, with all his boastful pretensions in controlling the lower forces of nature, would make a dismal failure in producing the abundant crops of fine fruit that supply the markets of the world, without the help of the industrious honey-bee.

It is sometimes said that Nature makes no mistakes. Yet freaks are no uncommon occurrence. Sometimes we find coupled on a man's shoulders a donkey's head, exhibiting all the stubborn, kicking and self-willed disposition of the real animal. A very good illustration of this character, is that man who repeatedly persists in spraying during fruit bloom, thus killing his friends—the bees—and injuring the bloom by poisoning the tender organs of the flower. Efforts to convince him of his error are in vain. He is at variance with the world, sadly out of harmony with himself, and you are forced to the conclusion that "to convince him against his will, he'll be a mule still."

A great many horticulturists are not bee-keepers, yet they should take that honest pride in helping to keep their neighbors' bees, that is characteristic of the liberal-minded man who knows when he has been benefitted, and is willing to acknowledge the favor. This seems easy enough in the blooming spring-time, when all animated Nature is in tune with the Creator; when the very air that surrounds us seems to be laden with perfumed poetry, set to notes almost divine, and everybody loves his neighbor. However, when the latter part of the summer arrives, if there should be a scarcity of honey-producing flowers, the bees' short-comings are manifested; then, how soon the whole scene, stage and all, seems to tumble upside down, and rehearsal of prose—very common, every-day prose—mingled here and there with ugly nerve-grating epithets may be heard, out in the orchard, at the cider-press, and even in the kitchen around the preserve-kettles and jelly-pans. Bees, like human beings, are not without faults, and when the fruit-harvest comes on, they, like men, will go to collect a part of the crop that they have helped to produce. They, however, take the rotting, cut, punctured or bruised—the very culls of the crop—while man takes the best and then is not satisfied; he wants to cheat somebody by placing these culls in the middle of his boxes and barrels.

Bees do not lead in the ugly work of puncturing sound fruits, as many people believe. Their mouth-parts are made for working soft wax, and not for cutting and puncturing; but they will quickly engage in the work of carrying off the spoils, when the skin is once broken or cracked, as it often is after a sudden flow of sap, or when punctured by birds, yellow jackets, wasps, curculio and other insect pests, or by fungus growth which causes rot, which is so often noticed in peaches, in which case the broken-down tissue presents such a slight change at first that it is unobserved by the fruit-grower until the bees, that are close observers, have detected it, and are at work trying to save what would otherwise go to waste. Then the fruit-grower comes in and says, "The bees are doing it; I see them at it; you can't fool me!" He might with equal propriety say that the common, old, every-day buzzards were directly responsible for the death of some fine animal that he lost, because he found them feasting on its dead carcass.

These fruit-juices are decidedly harmful to the bees; but here, again, we find them acting like some people—imbibing too freely of that which does them hurt. But men do not wait for drouth or famine to cause them to hunt for the tempting of peach and grape. It is in time of scarcity, and under the above-named conditions that the bees swarm to our fruits, cider-presses and kitchens, and we, trying to follow out the principles of the Golden Rule in the relations with our bee-keeping neighbor, learn then how much easier it is to be a Bear, than it is to forbear.

In such occasions we should learn to use the "memory of services rendered, as oil for the rusty machinery of patience." Yet many people will spend much more time in grumbling and growling about some slight loss of these culls, and a few accidental stings received, than they will in thankfulness for benefits measured to them in the half-bushel.

Some people will magnify a bee-sting until it seems greater than a railroad accident, and still seem to be unmindful of their own cruel words and unkind actions, which may be stings of much longer duration to some neighbor or friend.

If the world would pay half the attention to the human stings that are inflicted along the highway of life, in the wild, delirious scramble for wealth, position, and power, that some people pay to an occasional bee-sting, what an uplift society could receive!

The colony inside the hive, again like human society, often maintains a large number of drones, which live by the toils of others; but, toward the approach of cold weather, the society of the hive kills or drives out its drones, while human society increases the number and gives them increased privileges. If the workers or producers in human society should deal thus with their drones, and public leeches, there would be an exodus to tropical climes, the like of which has never been known. Then, if the Red Sea could forever be closed in behind them, another Day of Thanksgiving and Prayer would be in order. But as they are here, and most likely to stay, let us hope that they yet may learn to emulate in good qualities the poor drone of the hive, which does but little harm outside of satisfying his enormous appetite, filling the station in life that nature intended he should, and disappearing with the close of the season. What a world this would be, if everybody would come as near performing his assigned part in life as does the poor and much-abused drone-bee!

Sometimes both bee-keeper and fruit-grower meet with disappointments by the failure of their crops. Then they wear the same kind of clothes. They wrap themselves in coats of hope for future success; they put on caps of faith in their chosen vocation; then feast their hungry souls on rich anticipations. "Fortunately, however, the perfection of a man's happiness bears but little relation to the size of his fortune;" for he who can lovingly and patiently watch the slow developments from the bloom to maturity of fruits, and carefully protect them from disease and insect pests, and he who can keep himself in tune with the merry hum of the honey-bee while skillfully directing it in the production of a crop of honey—that sweet of all sweets—can find happiness and contentment not to be measured by dollars and cents. Such men are not idlers or drudging slaves on the public highways of life, although their work may be hard and constant; they are in reality students, teachers and rural artists, who understand how to guide Nature's trowel and paint-brush in putting on the finishing touches to their products. They understand what the same great Chemist who is compounding the food-values of the fruit, is filling the prescriptions in the honey-laboratories. They are intelligent and worthy citizens, and at present are on very friendly terms. We have now followed this congenial pair from the time, when the bee, which, a little contrary to the custom of her sex, first went courting the fair flowers, and when she betrothed her life in kissing life and hope into the fair blossoms; on up to where we found a little friction, that justly should not exist, and which was removed by an application of the Golden Rule; and now we find them marching down the aisle, strewn with flowers, to the march rendered by the mockingbird high in the top of the Old Apple Tree, pausing under the Smilax for the question, "Are there any objections?"

Springfield, Mo.

Bee-Keeping in Mexico

BY B. A. HADSELL.

In going south over the Mexican Central Railroad, I see by referring to my memorandum, the town of Logas has irrigated alfalfa, mesquite, catclaw, wild pepper, and cactus. Three locations are in view where, say, 600 colonies of bees might be kept. The next station, Francisco, with three locations or 600 colonies of bees. Both of the above towns have street-car. Siloo has 10,000 acres in corn in view—two locations suited for 400 colonies of bees; plenty of machocha, mesquite and willows. Land is $100 to $200 per acre beyond the town—good locations for 4 apiaries or 800 colonies.

At Irapuata strawberries are sold at the train every day of the year; also it is good bee-country, where one apiary is kept by a German. There has been only one frost in 20 years at this point.

Quertaro is the place where Maximillian was shot. Farm hands get 20 cents in gold per day, 1 peck of corn, and 1 peck of beans per week, and board themselves. In the factories they get 50 cents, 75 cents, and $1.00 a day, and board themselves. Forty cubic inches of water and the land to put it on cost $100,000. Artesian water can be had at a depth of 700 feet.

On ascending the mountain you look back over the valley and can count 13 artificial lakes for irrigation, and 20,000 acres of corn, all frosted, and nearly a total loss. I saw 50,000 acres of corn on this route, and south of the City of Mexico, toward Vera Cruz, almost a total loss by frost. It is estimated that the early frost damaged Mexico $40,000,000. At Horseshoe Curve, on the railroad a few miles further on, the frost had not killed anything; 200 colonies of bees could be kept. The flume, all of masonry, to carry irrigation water, is 30 feet high and one mile long. In passing southeast over the International Railroad, each looks like a town with horse street-cars connecting the stations with probably 20,000 acres in corn in view, all frosted. Pulpa and barley are also grown extensively.

Then after leaving Delmonte, we look down out of the clouds upon a beautiful valley, 4,000 feet below us, dressed in living green, with crops in all stages; some planting, others harvesting, with the smoke from two large manufacturing towns. Here the railroad winds back and forth three times in the descent. We have dropped down out of the clouds. The frost-ridden, cold and dreary one-crop region through the gates of the Tropics—a bee-man's paradise, everything so different; you feel as though you were dreaming of Paradise, and wonder whether it is only a dream.

Cordova is a beautiful city, beyond description. There the Vera Cruz and Pacific Railroad goes south to Santa Lucrecio, where we connect with the Tehuantepec Railroad. From the time we drop out of the clouds it is one continuous bee-country, except where the country is grass and devoted to stock-raising.

At Sanborn I examined an apiary which was in 10-frame Langstroth hives, painted, and in good condition. I was informed that they began with 14 colonies last spring, increased to 97, and extracted two tons of honey. They sell 5-gallon cans of honey at $9.00, Mexican money. I also see their honey on the market in Cordova, in 1-pound jars, at 80 cents per pound, Mexican money.

Buckeye, Ariz.

(To be continued.)

Convention Proceedings
HILTON

Wisconsin Convention Report

The 31st annual convention of the Wisconsin State Bee-Keepers' Association was held at Madison, Feb. 2d and 3d. It was called to order by Pres. Huffman, at 10:30 a. m., Feb. 2d.

The report of the secretary, and also of the treasurer, were read and approved. The latter showed a balance of $177 in the treasury.

On motion, a committee on resolutions was appointed consisting of N. E. France, George W. York, and A. C. Allen.

Mr. York addressed the convention as President of the National Bee-Keepers' Association, and was followed by Mr. France, as General Manager of the National. The latter suggested the appointment of an assistant superintendent of the apiarian exhibit at the Wisconsin State Fair in addition to a judge. The committee on resolutions were instructed to embody such recommendation in their report. Messrs. York and France also spoke on increasing the membership of both the National and the State Associations, and several plans were suggested.

AFTERNOON SESSION.

The afternoon session was called to order by Pres. Huffman, at 1:30 p. m., after which he read the following:

President Huffman's Address.

I am pleased to meet the members of this the 31st annual State convention of Wisconsin bee-keepers, under such favorable circumstances. I am glad to see so many present, for there is inspiration in numbers. It is an important occasion, and I hope it will be very interesting to those who are engaged in the bee-industry though to a greater or smaller extent.

This convention is not called in the interest of those taking no part, simply seeking amusement. Such will not care to attend. It is a meeting for business, for deliberation, to hear reports, to decide on the best methods given. Men learn by asking questions. Here may be the place whereby we may receive a key which will unlock the many mysteries connected with the most wonderful and mechanical little insect. We can equip ourselves with the knowledge of how and when to act; where we may become conversant with the nature and habits of bees; discuss all questions pertaining to them; receive the opinions of others which prove as valuable; where all matters may be thoroughly ventilated; where we can unite with profit and emphatically say *no* or *yes* to all things common to the best interests of the bee-keeper. Through our convention proceedings the bee-keeping fraternity has become awake to bettering conditions. Through organization, and to my way of thinking, we hope to keep the interest of the bee-keeper somewhere near its true level.

To those who have not experienced the helping influence of the state organization, I would say, try for yourselves. Who in our ranks has not, or would not have, welcomed valuable information on the honey crop and the honey market at such times; and would not be pleased to think *your* crop, together with that of your neighbor, could be handled for you to the very best advantage. While we have received valuable help in the past, we start out this year equipped with the advantages of the past, expecting greater things to develop in the future.

I would like to impress upon you the advantage and necessity of co-operation with your fellow bee-keepers in every possible way, for co-operation is the great factor of the twentieth century.

Bee-keeping is a science and a progressive science. Those who have the inclination are investigating, and ready to give us new points which will prove valuable. What we need in this State, and in fact every State, is a greater knowledge—a practical knowledge—of our industry. Here we have the privilege of listening to the papers and discussions of scientific and practical men. We find development in varied ways. Furthermore, we have men attending our conventions who have become students of the anatomy and physiology of the bee, and there are depths which, as yet, have not been reached. As one writer has said, we are in a high-tension age, and consequently look for greater results. No one would consider the expense of our gathering—the meager amount paid as dues—when compared with the benefits derived.

I see several writers have mentioned the subject of whether the bee does more harm than good to the fruit-growers! I hope this question will be discussed satisfactorily to all present, and that each may take away enough in his larder to be able to settle all disputes, or accusations brought against the most useful little insect.

There is, however, one other feature that I wish to mention, and though last, it is by no means least. The social hand-shake, the genial humor and sunny atmosphere which always seem apparent at our annual gatherings—the enthusiasm characteristic of our brother bee-keeper. Business without pleasure or sociability grows dull. There is an old adage, "Work and then play," or business before pleasure. I have no objection to this, but I think there is no harm to combine business with pleasure.

In conclusion I will say: Be yourselves. Be at home. Exchange smiles as well as thoughts, and we doubtless will make this convention memorable for more than one reason.

JACOB HUFFMAN.

Monroe, Wis.

The following paper by Miss Mathide Candler, of Cassville, Wis., was read by Secretary Dittmer:

Wintering Bees on the Summer Stands.

I have been asked to prepare a paper on wintering bees on their summer stands. I do not know that I can add anything new to this old, but ever interesting, subject; but, as I have had fair success in wintering bees outdoors, I will give a short account of my experience, and what I think I have learned from it.

I have changed my method of packing hives for winter, at different times. My first winter-case was a shallow box or frame, about 3 inches wider than the hive on all sides, which was slipped over the hive. It had muslin tacked to the rim so as to form a kind of sack under and around the hive, and about 6 or 8 inches was put on top. Then the muslin was neatly folded over and fastened in place with pins.

Later I used wooden winter-cases without bottom packing, using them singly, 4 in a case, and in long rows of 10 in a case. Then I began to experiment with tar-paper wrapped around the hive, and now I use that method of winter protection altogether.

Before putting on the paper I examine the top of each hive carefully to see that the cover is sealed down tight, and that here are are no chinks, or crevices for the heat to escape, or for a draught through the hive. If the top is not tightly sealed I close the opening with clay, or paste a newspaper down over and around the top. About 5 inches of planer-shavings are then put over the sealed cover, the hive-cover is put on, and paper wrapped snugly around all. The entrance is left open the full width of the hive.

It seems to me that with a small hive-entrance bees are more inclined to have dysentery.

I like paper protection, for several reasons:

1st. Both bees and combs are dry. I think this is because the moisture condenses on the sides of the hives, due to the thinner and colder side-walls, instead of above the bees.

2d. While it is quite a little work to fix them up properly, the work is not heavy, and therefore it suits me best.

3d. It does not require so much storage-room as do wooden winter-cases.

From my experience I should say that there should be no packing below the frames, and not much on the sides; but a good, thick packing of some kind at the upper part, and above the frames, is necessary for outdoor wintering of bees.

Cassville, Wis. MATHILDE CANDLER.

In the discussion following the foregoing paper, Mr. Allen said that Miss Candler winters her bees in 2-story hives with the bees in the upper story. Mr. France said that her hives were protected under a bluff.

Extracting Honey.

"How ought good honey to be heated without injuring its color?

Mr. York would heat it as high as 160 degrees, but it must be bottled at once, and there will be little granulation. It has, however, a tendency to injure both color and flavor, if kept for too long a time at 160 degrees or higher. He described a method of blending to make a good basswood flavor, to help to prevent granulation.

Getting Old Pollen Out of Combs.

"What is the best method to get the old pollen out of the combs?"

Melt the old combs, and render into wax, and then use comb foundation.

Fastening Foundation in Frames.

"Which is the best and easiest way to fasten medium brood foundation in a Langstroth triangular top-bar brood-frame, wire or splints? Is it necessary to use either when foundation is re-enforced by brushing melted wax over part of it?"

The re-enforcement plan had not been tried by any one, but the majority agreed to try it the coming season. It seems to be the opinion of all for extracting combs that wire is necessary. The re-enforcement plan was demonstrated and explained by Mr. France.

The following paper by Harry Lathrop was read by Secretary Dittmer:

The Bee-Keepers' Need and Enemy.

What is it that bee-keeper's need more than any other thing? The question is easily answered. It is a reliable market for honey.

What is the greatest enemy of bee-keeping in the United States? Not foul brood. That enemy can be handled by the intelligent bee-keeper. The greatest enemy of bee-keeping in our country is the glucose trust. The individual can fight disease, but he can not, alone, fight organized greed. Only the united effort of all producers can effect desired legislation; and we must also enlist the aid of all fair-minded people who want to see the right prevail.

The extracted honey that is sold in the country districts at the present time, amounts to only a drop in the bucket as compared with the glucose syrup that is sold under different names, usually as corn syrup. Whatever it is, it is not a natural product, and, by reliable information, is detrimental to health. Yet the trust magnates have the "gall" to advertise it as being "better than honey."

I will say here, parenthetically, that I have talked with some who have worked in glucose factories, and they declared that they would not eat the product that they had helped to manufacture. It seems, from what they told me, that hoofs and other refuse from packing houses are used to give "body" to the stuff!

The future of our industry depends largely upon the sort of fight that we can put up against this insidious foe. Considering society as a family, what sense is there in destroying large amounts of grain to produce an artificial product, when real health-giving nectar is going to waste all over the land, and the saving of which for the use of humanity needs only the encouragement of the workers (bee-keepers.)

The manufacture of glucose is on a level with the making of whiskey. It is not done for the benefit of humanity, or for the common good, but for greed. If things were made for use instead of profit, how much of those poisons would be manufactured and sold? Greed of gain is at the bottom, and bee-keepers, I hail you as a class of workers who would not have to give up your occupation if the reign of righteousness should actually come on earth—the federation of the world, the brotherhood of man, under the Golden Rule.

Bee-keeping will ever be an occupation of the people, available to the man or woman of small means. Industrial slavery of the masses is the aim, consciously or unconsciously, of organized wealth. If there is anything that the glucose trust would like to do today, it is to crush out bee-keeping as an industry.

Fifteen years ago the dairy interest of this State was fighting for its life against the great packing houses. The dairy interests were strong, and they won the fight. You of Southern Wisconsin know the result. See the wealth that has been added to our State, and the happy homes of comfort and prosperity, because organized greed was not allowed to sell something "better than butter," and manufactured from nobody knows what.

Our cause is as just as that of the dairymen, and more urgent, as the product being put out to displace honey is not as fit for human food as oleomargarine, no matter how highly the latter is colored.

There is important work for us to do. The bee-keepers are in the fore-front of a battle, the result of which may mean liberty and prosperity for the masses, or it may mean serfdom, with all the machinery of government, standing army, navy, etc., in the control of the money-power. Let the bee-keepers' contingent do their duty in the struggle.

Bridgeport, Wis. HARRY LATHROP.

The nature of glucose and Karo Corn Syrup was discussed, and the use of both condemned.

The following paper by H. H. Moe was then read by the secretary:

Bee-Keepers as I have Known Them.

Bee-keepers themselves are an interesting class of people. By way of acquaintance, or an introduction, I shall present here in a brief paper my impression of some bee-keepers. Of course, I had read of some of the big men, and read something from some of them. It was my pleasure and privilege to attend the National Convention at Los Angeles, Calif., in 1903, and the Harrisburg Convention in 1907. These two conventions, at the extremes of our country, brought me into contact with some of the big kee-keepers in various parts of our country. A photograph of the Los Angeles Convention is especially valued. It is an art work in itself, where such men as Prof. A. J. Cook, Dr. C. C. Miller, A. I. Root, George W. York, W. Z. Hutchinson, N. E. France, and a large number of other noted bee-keepers, were assembled. For this convention a special car for bee-keepers from Chicago to Los Angeles was chartered. This car the party of bee-keepers occupied for six nights, and the pleasure of this trip will long be remembered. The delightful visits, the beautiful songs, and wonderful scenery, are not soon forgotten. The only thing that marred the dignity of the party was the appearance of a deck of cards, one day, that tumbled on the floor. Some said, jokingly, that it was Dr. Miller's; some said it was Mr. Root's; but if any one claimed the deck, I failed to find out who it was.

One day, while our train stopped for a short time for dinner along the route in Western Kansas, many of us were hurrying to dinner at the hotel. Mr. Hutchinson and myself were together. Right in front of him was a very pretty girl who had just pulled a chair back from the table, which she no doubt intended to occupy. But Mr. Hutchinson was too quick for her, and squatted himself right down in her chair, and proceeded to do justice to the dinner. He was perfectly unconscious of the beauty of the girl, or that he had in any way been impolite.

As for our memorable visit to the Grand Canyon of the Colorado, that would be deserving alone of a longer paper than I intend to weary you with here. How our midnight sleep was disturbed by the yip, yip! and bow, wow! of the coyotes. Mr. Hutchinson and Mr. France are big bee-men, but a trip down into the Canyon scared them out. They remained on top and described us as little ants crawling along the mountain side. Wonderful scenery, indeed! The interesting gospel service Sunday morning, by the bee-keepers, in the hotel—a place unused to such services—will no doubt long be remembered. And were they not appropriate? The beautiful song, "Not Ashamed of Jesus," by Mr. and Mrs. York, (the latter now deceased), will not be forgotten. Dr. C. C. Miller's resonant tenor voice in "The Rock That is Higher Than I," sounded especially inspiring in that region. A. I. Root, one of the best known bee-keepers in all the world, spoke on the text, "In all thy ways acknowledge Him," and his address also seemed very appropriate.

But I set out to write a brief paper, and not one to put you to sleep. You wish to know my impression of some of these bee-keepers? Being a school-teacher, my fellow laborers I would generally recognize as clean and intelligent. The typical leading bee-keepers I have met I can also characterize as clean and intelligent—two very high accomplishments, and not as common as I wish they might be. Nor are these characteristics possessed in so high a degree as they might be in certain quarters. But the typical bee-keeper is also a *pure-bred* Prohibitionist, and when I say that, I am paying them a high compliment. My first personal acquaintance with the Editor of the American Bee Journal was to learn that he had refused to publish a recipe for making wine out of honey. I immediately made up my mind that the Editor was indeed worthy of being at the head of a great bee-paper.

A. I. Root's attempt to curtail the tobacco habit by offering a bee-smoker to any one who would discontinue the use of the poisonous weed, (and if resumed, to pay for the bee-smoker), was, I believe, quite generally known. Let all such good work go on.

Should anything of what I have here said make any of the big bee-keepers sort of stuck up, you would better empower the president to take them down a notch or two!

Woodford, Wis. H. H. MOE.

The discussion and reminiscences which followed developed some facts that Mr. Moe, naturally, would not mention in his paper.

Sugar Syrup for Winter Stores.

"What is the best method to make sugar syrup for winter bee-food?"

Two parts sugar to one part water, thoroughly mixed by churning it

Sealed Covers in Winter.

"Are sealed covers preferable to burlap for out-door covering for bees?"

Almost all those present preferred sealed covers for cellar-wintering of bees?

Winter Bees' Nest—Feeding Sugar Syrup.

"Do bees make a nest for winter?"

The general opinion is that they do.

"What is the best way to feed sugar syrup to bees?"

The Miller-feeder is the best to use for feeding bees for winter stores.

Blacks vs. Italians—Feeding Bees in Winter.

"How many prefer the blacks to the Italian bees?"

No one.

"What and how would you feed bees when too cold to feed liquid food in winter?"

Put over the bees a super with comb honey.

Filling Empty Combs with Syrup.

"How would you fill empty combs with syrup for winter feeding?"

Let the syrup run down on the comb on a slant, by pouring, which is faster than sprinkling.

Liquid or Candied Honey—Strength of Colony for Winter.

"When selling honey in 60-pound cans, is it customary to have it liquid or candied?"

Candied, unless the market demands the liquid form.

"Is it desirable to have a colony very strong for wintering? Will it winter better than a medium colony?"

That depends on the age of the queen, and whether a large proportion of the bees are old.

This brought out the question, "How can you sort them from young bees?"

It was suggested to move the hive to a new stand, placing the empty hive at the old stand, and let the old bees return.

Mr. Huffman thought a medium colony would winter better than a strong one, as the latter would consume too much honey, and there would be too many dead bees.

Doolittle Feeder—Carniolan Bees.

"How many have used the Doolittle division-board feeder?"

Mr. Allen has 50 of them, and likes them very much, especially in cold weather.

"Has any one tried the Carniolan bees?"

No one present had ever tried them. Mr. York mentioned Mr. Byer, a Canadian specialist, who prefers them to the Italians as honey-gatherers, but they are somewhat excessive swarmers.

Pure Food Law.

"Has the National Pure Food Law been a benefit to honey-producers? If so, to what extent?"

It has given confidence to the consumer as to the purity of honey, but it has not raised the price of honey, nor increased the demand.

Shaking Energy into Bees.

"Can you really shake energy into bees?"

Shaking bees for the purpose of putting them to work had generally been found unsatisfactory.

Second Day—Morning Session.

The convention was called to order by Pres. Huffman, at 9:30 o'clock.

The report of the committee on resolutions was read by Mr. France, as follows:

Report of Committee on Resolutions.

Resolved, That in the recent death of our oldest member, D. D. Daniher, of Madison, Wis., the last surviving charter member of this State Association, we have lost a valuable member; and hereby tender to his family our sincerest sympathy in their bereavement; that a copy of this resolution be forwarded to his family by our secretary.

Resolved, That this Association elect one of its members and also a substitute, as delegates to represent us at the next annual meeting of the National Bee-Keepers' Association; and that one-half the carfare of said one acting delegate be paid by this Association.

Resolved, That this Association recommend to the State Board of Agriculture, the appointment of a special Superintendent of the Apiarian Department of the Wisconsin State Fair. Be it further

Resolved, That Franklin Wilcox of Mauston, be appointed Judge of the apiarian exhibits at the Wisconsin State Fair.

Resolved, That the Executive Board of this Association (including N. E. France) investigate the publication of reports of its annual meetings; and arrange for such publication, with full power to act, taking into careful consideration the expense thereof, so that it shall not exhaust our treasury. Be it further

Resolved, That said Executive Board (with Mr. France) be authorized to take such measures as they deem wise to increase the membership of this Association, explaining the advantages of membership in both State and National Associations.

Resolved, That the President of the Wisconsin State Association and State Inspector of Apiaries, urge the Wisconsin State Legislature to enact a stringent law prohibiting the poison spraying of open fruit-bloom, for two reasons: 1st, that the invaluable pollenizing insects, including bees, are thus killed; 2d, that the open blossoms thus sprayed are largely destroyed.

N. E. France,
A. C. Allen,
George W. York,
Committee.

On motion, the foregoing resolutions were adopted.

Mr. France was recommended for the position as assistant superintendent of the apiarian exhibit at the Wisconsin State Fair.

The following paper was read by Mr. Allen:

Perfect Control of Swarming—Large Crops of Honey and Easy Increase.

When the subject of swarm-control is suggested, I realize it is one which has been threshed over until to many it is a stale story. Yet because of the wonderful results which we anticipate would accrue from absolute control of this unpleasant feature of our occupation, we still aspire to the desired end.

While realizing that location has much to do with most plans, I believe the problem is satisfactorily solved for this latitude, and I cannot see why it will not work in most places.

Since we last met here, two plans have been given to the public, both of which, it is claimed, have proven a perfect success in the hands of those practising them. One is a very wasteful way, and directly opposed to Nature's plans, and I think no one will doubt but that it accomplishes the object and discourages the swarming inclination, as completely as the beheading of all the larger children in a good-sized family, would discourage the parents who reared them.

To describe the plan which I have worked out, permit me to go back to the days when I began bee-keeping, and relate what led to its development.

Twenty years ago last fall I began the study of apiculture with the "A B C of Bee-Culture," and one colony, with my brother as half-share partner. Fortunately the colony wintered well, and in anticipation of increase we purchased 2 second-hand hives, and paid a carpenter $4.50 to make 3 more (which, by the way, he never made, so we still have "something coming").

Our anticipations were correct, for that colony did cast 5 swarms, and we saved 2 of them, the other 3, which were hived in nail-kegs and a cracker box, absconding. We also got $5.00 worth of comb honey; but the loss of those vagrants so discouraged my brother that I bought him out, and decided to paddle the canoe alone.

In those days, desiring increase, swarming was considered an omen of success, and no sound was sweeter than to hear the cowbell, dishpan-drum, dinner-horn, and feminine voices shouting, "The bees are swarming!" when we would rush from field or garden and join in the fracas. This order of things continued until the apairy numbered about 30 colonies, and 2 to 4 swarms would appear at once, and go 20 to 30 feet high in the near-by maples, when I began to think differently about the swarming business.

1st. My first attempt to control it was by means of *a perforated zinc trap*, with a slide which I kept closed whenever absent from the apairy; but as most of you are familiar with its good and bad features, I will only say that it was but a few years before we discarded it for the following:

2. The advance step of *clipping the queen's wing.*

3. Next, *large hives* were advocated, and with many to-day their use seems to be about all that can be desired; but even with them where is the man who can say he never had a swarm when he did not expect it? I think it can be safely said we have all had some swarms from hives having an abundance of room, therefore it cannot be said large hives solve the problem; and with any of these three plans it was not safe to leave the apairy.

4. The fourth step was to clip out all queen-cells once a week. This was found quite successful, provided a cell was not missed; but it is a hard job to look so carefully over the combs of all colonies every week and not miss one; and sometimes the weather being bad, the bees were cross, but if we didn't go through them, we would have a swarming mania on the first sunny day. Besides, I know of no way that will degenerate an apiary so quickly as this very one, unless we constantly introduce new blood. Another objection to this system is that the colonies are kept all the season with the swarming desire, and we all know bees do not work as well when that is present. *The satisfied, contented colony is the one that works best.* I learned this fact, when, after losing several absconding swarms, no more were lost, by simply placing a comb of unsealed brood in the center of each hive in which a swarm was placed.

5. A fifth plan—that of certain hive manipulations, mostly with the sectional hive—has been recommended and practised with varying results.

6. And then a sixth came before us, that of shaking the bees on starters, compelling them to build new combs, which, in the hands of many, seems to be wonderfully conducive to sulking, absconding, and general discontent, on the part of the bees thus handled.

7. I will now offer a seventh. You know 7 is considered a complete number, so perhaps this is the last.

Studying upon the problem day and night, I began to put three facts together, viz.: 1st, a strong colony which will work all through the season making no preparations to swarm, is the one that gathers the most nectar.

2d. A new swarm hived on empty combs and one comb of unsealed brood, works with the greatest of energy, with no sulking or absconding.

3d. As the stirring up that a colony receives when shaken rightly and at the proper time, unquestionably puts new vim into them, led me to see if I could not combine all three of these strong points, and thereby accomplish the desired end; and it would seem that I have hit it, for there has not been one failure after trying it three seasons.

In performing this, the operator may shake or not, as he chooses, and results will be about the same, for if we happen to discover the queen when we first open the hive, she can be put in her proper place, and the shaking dispensed with. We will call it the "Non-swarming Brood-Exchange Plan."

Nearly every method heretofore used to prevent swarming weakens the colony, but this does not: the entire colony is kept together for the clover flow, and is made stronger for the fall than it could possibly be were it not thus treated. Your boy or girl, hired hand—yes, even your wife—can do it as well as you can, and your mind can be at rest, for the bees will not swarm that season.

Every means possible is used to get all colonies strong at the beginning of the honey-flow, and in the case of 8-frame hives, the queen is given the run of two stories for egg-laying; thus the swarming fever is not contracted before the clover flow starts, and just as it is nicely on I apply the treatment, which both prevents and satisfies all desire to swarm, and causes the queen to continue laying as vigorously as before; thus getting a fresh lot of workers ready for the fall flow, instead of slacking up on laying at this time, as is the case if left to themselves.

When the honey-flow is well started I go to each strong colony, regardless of whether the bees desire to swarm or not, and remove it from its stand, putting in its place a hive filled with empty combs, less one of the center ones. Next, a comb, containing a patch of unsealed brood about as large as my hand, is selected from the colony, and placed in the vacant place in the new hive; a queen-excluder is put on this lower story, and above this a super of empty combs, this one having an escape-hole for drones; and on top of all, an empty super. A cloth is then nicely placed in front of this new hive, on which the bees and queen are shaken from the combs of the parent hive, and the third story is filled with the combs of sealed brood and brood too old to produce queens, and allowed to remain there and hatch, returning to the working force. Thus the swarming fever is satisfied, the colony is stimulated to do its utmost in honey-gathering, and the queen is encouraged to lay as in spring-time. Yes, much better, for in two weeks she will have 5 to 7 combs filled with brood and eggs, which forces the honey above, where we want it.

It does not take five minutes for the bees to find that brood above, where it is nicely cared for. There is no sulking, for in less than an hour the colony is at work as though nothing had happened, and as the brood hatches its combs are filled with honey, and often a fourth story has to be put on to catch the flow, for in keeping the whole colony together we get big results.

The old hive often contains more brood than will go in this third story, and the balance is put on any weak colonies that may be in the yard, thus strengthening them.

If I want increase, it is made about 10 days afterward, by simply lifting this upper story of brood off and placing it on a new stand, and given a ripe cell, or a queen. As all bees that are old enough to be field-workers will return to the old stand, nothing is lost from the clover crop in this way, and these new colonies sometimes secure a super of fall honey, and are the very best to go into winter quarters, as all their bees are young.

If any of you will try this plan, I will be pleased to have you report results, and any questions or criticisms will be gladly considered. A. C. Allen.

Portage, Wis.

Mr. Allen demonstrated his non-swarming plan, and many questions were asked, showing much interest in his methods.

Mr. York then read the following paper on,

Honey—Its Marketing and Staple Use.

To some bee-keepers the word "honey" is almost a new one, so far as the honey season of 1909 was concerned. A few not only harvested no honey at all, but even had to feed their bees; or else what their bees did store was honey-dew, which in some instances, was but little better than no honey at all, and in other cases worse than none, especially for the bees' winter stores.

But as the good honey season have been in the past, so they will be again in the future. About 20 years ago there was considerable said about the then poor and discouraging honey seasons, many bee-keepers even wondering if the good honey crops of the early '80s would ever be repeated! But it was not so very long until the good old seasons came again, and with increased amounts of honey, so that the crops of 1903, 1906 and 1908, were even more abundant than those of the former bounteous years.

While, of course, there will be little or no difficulty experienced in disposing of the honey crop of 1909, very likely another large crop will soon be here, and the question of marketing it will be up for consideration again. In the meantime it may be well to look at some of the present most successful methods of disposing of honey.

Perhaps the bulk of the honey crop each year is sent to the large city markets—sold wholesale. This, of course, the easiest way to sell, but not always the most profitable to the producer. And yet, for the most extensive producers it is the best way, for such can not hope to work up a demand at home sufficiently large to take all the honey produced in their immediate locality.

But all who ship or sell wholesale should be exceedingly careful with whom they deal. There are commission men who handle all kinds of produce, and such do not know best how to dispose of honey. They seem to think that any old price will do for honey, so long as they get their commission on the sales they make. And thus often the market is ruined before much honey has begun to be shipped.

In nearly every large city there are now commission men or dealers who make a specialty of honey. They have developed a line of customers to whom they can sell honey right along, year after year. Such dealers can usually realize much better prices for the producer than căn the ones who know little about honey.

Every bee-paper publisher knows pretty well who are the reliable and best wholesale honey-dealers, and if every bee-keeper reads the bee-papers (as, of course, every up-to-date bee-keeper does), he will have little trouble about learning where it is best to ship his honey.

Next is the retailing of honey—that is, selling it near home, or to consumers residing within a short radius of the producer. Many bee-keepers, after years of patient effort, have developed a good local demand. If more would do this, I think all would soon find that better prices, both wholesale and retail, would result. Less honey would be sent to the already overloaded city market, and thus, by reason of less quantity, a higher price would be realized; and by cultivating the home market, it would be found that soon more honey would be required to supply it, or else what honey there is to be disposed of there would bring a better price. The fact is, there are thousands upon thousands of people in the country and in small cities that do not see any honey from one year's end to the other. And this ought not so to be. It surely doesn't pay to neglect the home market, and overstock the large cities with honey.

And this brings me to a consideration of honey as a staple article. You ask, Will honey ever be used as commonly or as extensively as sugar? Maybe not. But the fact remains that it *ought* to be used ever so much more generally than it is today. And it is "up to" the bee-keepers themselves to see that honey has its rightful place among the articles of daily consumption. I say *daily* consumption, and I mean it. I declare that honey should always be on every table, just as much as butter or any kind of sauce or fruit. And surely at the present price of extracted honey, why should it not be eaten daily? Oh, yes, I know that some people say that they don't care for honey! But I have found that there are but very few people who would not eat honey pretty regularly if they had a chance!

Right here I want to touch upon the *form* of honey to be placed before the people, if we ever expect it to be used extensively, or by practically everybody.

Of late, my attention has been called to chunk or bulk comb honey, which has been in recent years such a success in certain parts of the South, especially in Texas. Do you know, I believe our Southern brethren have hit upon a good thing, in more ways than one? In the first place, they can produce more honey by their present methods than they could if produced in sections or even in the extracted form And then, they get a higher price for it than they could expect for the liquid honey free from the comb. They produce all their honey in shallow extracting-frames, then cut it out and put it in tin cans of various sizes, ready to be delivered to the consumer. And I can readily understand now nearly everybody would take to such honey, just as naturally as a duck takes to water. It has the real bee-honey taste. There is nothing about it that suggests artificiality, as do the clean, white sections, free from even a stain of propolis or bee-glue. Chunk or canned comb honey shows on its face that it is the real honey simply cut out of the hive and placed on the market. It could very well be put into tin pails or other receptacles, that may easily be handed out to customers. I predict that this method—which may seem somewhat slipshod, and savor a little of the back woods—will be practised pretty generally over the whole country within a very few years. It is a sane, sensible, successful method. It is economical for the producer—no sections needed, but plenty of shallow frames; more comb foundation, more hives, more supers, and then more honey harvested. And, with plenty of such super-room on the hives, there is going to be less swarming. The honey is not removed from the hives till the end of the honey season. Result, a better quality of honey because thoroughly ripened while with the bees.

But I didn't start out to boom chunk, bulk, or canned comb honey. And yet, I believe it is going to prove to be the method which will help most to popularize the use of honey—help make it a staple article of diet—sooner than anything else I know of. I think this method needs to be encouraged, because it will also put more money into the pockets of the honey-producers; more money in the bank for the bee-supply manufacturers and dealers; and thus bring the greater financial success to all connected in any way with the industry of bee-keeping. And above and beyond all this—and also more important—more people will be eating honey, and thus more people will have better health, will live longer, and be happier. And, maybe, more people will be keeping bees, more bee-keepers will "keep more bees;" and thus there will also be produced more and better fruit because of the more perfect fertilization of the fruit-blossoms throughout the country on account of the presence of a larger number of bees to do the work.

Now, you may say that all this looks very well on paper, but it is the talk of an enthusiast. All right, let it be so. But what I am telling you is already being accomplished in Texas and other parts of the South—that fair land that has in very recent years been teaching the North how to "sober up" and get rid of the curse of the open saloon, State by State. Who knows but our Southern bee-keeping brethren and sisters will yet teach us of the North, how to "*sweeten* up," as well.

Let us not despise our calling, but let us go forth to help make our goodly land "a land flowing with honey," whether it flows with milk or not. Our dairy cousins can look after the cow and milk part of it; let us attend to the bees and their honey.

Chicago, Ill. George W. York.

An interesting discussion followed the foregoing paper, in which some gave their experience with chunk-honey, which was both pro and con.

The election of officers resulted as follows, each being re-elected: President, Jacob Huffman, of Monroe; vice-president, Franklin Wilcox, of Manston; secretary, Gus Dittmer, of Augusta; and treasurer, A. C. Allen, of Portage. Delegate to the National Convention for 1910, Jacob Huffman; alternate delegate, A. C. Allen.

The question-box was again resumed.

Pollen in Wintering—Gasoline Engine in Extracting.

"Do bees need pollen for wintering?"

They do not need it, and are much better off without, as it is liable to be the cause of diarrhea.

"Will a gasoline engine run a 2-frame extractor?"

If you want to use power, use a 4-frame extractor.

Cellar-Wintering—Preparing Nuclei for Winter.

"Why are some colonies dry and others damp in the same cellar?"

This question was discussed, but no satisfactory reason given.

"Give the best method to prepare nuclei for winter."

Set them on top of strong colonies, with a ¼ inch board between them.

Introducing Queens—Shade for Bees.

"What is a simple and reasonably safe method of introducing queens?"

Mr. York reported success in nearly all cases by "drowning" the queen, or holding her under water, and then dropping her into the hive, having removed the old queen the day before.

"What is the best way to provide shade for the bees?"

What do you want shade for? If you must have shade, use shade-boards only. Too much shade makes the bees cross and slow to go to work. Sunshine makes not only better workers, but better honey.

Uniting Weak Colonies—To Prevent Swarming.

"Should weak colonies be united in spring?"

Generally speaking, no.

"Will it prevent or lessen swarming to move the hive backward on the bottom part 2 or 3 inches for free circulation of air under the brood-chamber?"

It will check it to some extent during warm weather, but do not have the draft in the upper part of the hive.

Meeting with Horticulturists.

"Is it advisable to have one or two joint sessions with the horticulturists?"

Mr. France explained that there might be an advantage; that we could have some of our papers in the State horticultural bulletin.

Mr. France was appointed a committee of one to confer with the Horticulturist Society in regard to this matter, and to have the paper prepared by some member to be read to that society at its next meeting.

Afternoon Session.

The convention was called to order at 1:45 p. m., by Pres. Huffman.

No other business appearing, the question-box was again taken up.

Nature of Bees—Selling Honey in Cans.

"Are bees better natured now than they were 20 years ago?"

All seemed to be of the opinion that they are the same now.

"Should honey in 60-pound cans be sold net or gross weight?"

Mr. Allen always sells gross weight, but there seems to be no rule, and all were of the opinion that gross weight is right.

More Extracted than Comb Honey.

"How much more extracted than comb honey can be secured from the colony?"

The general opinion is that more extracted honey can be obtained than comb, some even claiming to get double the amount of the former, but there is no rule.

"Will a colony that does not swarm yield more honey than where they swarm?"

It seems to be the experience of all who have observed, that bees will store more honey without swarming.

Reducing Freight-Rates—Comb vs. Extracted.

"What will reduce freight-rates on extracted honey?"

Ship as fourth-class, by boxing the cans and pails.

"Which is more profitable, comb honey or extracted?"

Messrs. Allen, Putnam and Huffman all expressed themselves in favor of extracted honey.

Bee-Cellar in Spring—Stimulative Feeding.

"Will it do to open the cellar door a few days previous to putting out the bees? Will it quiet them or make them more uneasy?"

It will do them good to open the doors during cold nights, but it should be closed during the day, if it is warm outside.

"Is spring feeding for stimulative breeding profitable?"

If the weather is warm it is beneficial for the honey-flow, and during the interval between two honey-flows, when no honey is being gathered, always considering the weather.

The convention then adjourned at 3.00 p. m., to meet at the call of the Executive Committee in 1911.

Gus Dittmer, *Sec.*

New Jersey Convention Report

The annual meeting of the New Jersey Bee-Keepers' Association was held in the State House, at Trenton, N. J., Dec. 18, 1909.

At 10 a. m., Pres. W. W. Case called the meeting to order, and gave a short address. He expressed himself as pleased with the activity of the Association the past year in working for a Foul Brood Law, and in increasing the membership.

Short Cuts in the Apiary.

The first talk was by J. M. Donaldson, on "Short Cuts in the Apiary." One of the first requisites to applying "short cuts" is to have the latest and best appliances; every hive and fixture an exact counterpart of the other in the apiary. Have all colonies numbered; keep an exact system of records; get rid of division-boards; and keep colonies free of drone-comb.

An excellent method of making increase is as follows: Take frames of brood from any colonies that are strong enough, with adhering bees, being careful not to get the queen; assemble them together in a colony, give them a laying queen in a cage, and in a week to ten days the colony will be as good as any in the yard.

He believed the capping-melter one of the best "short cut" appliances to be used. He said that to prevent the honey from being darkened, it should be allowed to run off as fast as melted.

In uncapping, he recommended a cold knife and downward cut.

Mr. Donaldson's talk was followed by discussions, of which the matter of records was the most important. Mr. Hornor used the system of records advised by Mr. Donaldson. He has the numbers painted in large figures on the alighting board of the hive, and the records are kept on a slate. This system has many advantages. When a colony is changed in the yard, leave the alighting boards and make changes on the slate. The numbers are at all times in regular order, and not scattered all over the yard as in numbering on the hive-body. Then, the slate can be taken into the shop or house at night, or on rainy days, and the condition of the apiary studied, and the work planned.

Bee Races and Characteristics.

The next paper, "Races of Bees and Their Characteristics," was by Franklin G. Fox, of Erwinna, Pa., late assistant in the Government Apiary at Washington, D. C.

He gave a brief history of the introduction of the honey-bee into this country, saying that they were first brought here previous to 1763 by the Spaniards; they appeared in New York State in 1793. They were first noticed west of the Mississippi in 1807.

Briefly, some of the characteristics of some of the races were as follows: The only thing worthy of mention in favor of the blacks is that they are excellent workers on buckwheat, and build nice, white combs. The first Italian bees were imported into this country in 1860, and since that time have become almost the standard bee. Their characteristics are too well known to need description.

The Cyprians he described as good workers, good breeders, and not too cross to adopt generally.

The Carniolans he considered good breeders, good winterers, and good workers, and the gentlest of all bees. Their objection, so far, is their tendency to propolize so much about their hive-entrance on the approach of cold weather. But, he said, much of this could be overcome in the fall, and in having all the colonies face the south.

He recommended the Banat bees as best of all. He said their working qualities were equal to any other race; they are good breeders, but would not breed so much out of season as other prolific races. He said they are as gentle as Caucasians, gather almost no propolis, and swarm but little, making them especially desirable for comb honey production.

The paper was followed by a discussion. Some expressed objection to the Italians, that they were slow to breed up in the spring, especially if the spring was cold and backward. But the reply was that if the hive was full of honey, they will breed up in time for the flow.

Securing Foul Brood Laws.

Mr. C. B. Howard gave a talk on, "How New York State Secured a Foul Brood Law." The first thing they did was to secure the support of the Commissioner of Agriculture. The law was drafted so as to put the matter of inspection under the Commissioner. To secure the law, bee-keepers must stand together and support the Committee they elect to get a Bill passed. The bee-keepers throughout the State must write and see their senators and assembly-men, and explain to them what foul brood is, what loss it is causing, and ask that they support their Bill. The importance of the bee-keepers making their needs known cannot be overestimated. Bee-keepers must write their senators and assembly-men.

Wm. E. Housel gave a brief address

on the efforts of the New Jersey bee-keepers the past year, in trying to get a Foul Brood Bill. He said that we had made a good impression—a good beginning—and felt that we ought to be able to get it this year.

In the discussion that followed Mr. Hornor suggested that we try tc get an endorsement of our Bill from the State Horticultural Society. A committee of three was appointed to get the endorsement of that body.

There was now a general discussion of our Foul Brood Bill, section by section, by all present. Section 2 came in for considerable discussion. The part that authorizes the inspector to destroy diseased colonies, after the owner has been notified and instructed to treat the disease, and neglects or refuses to do so—part of the members contended that it would be destroying property without due compensation. But the other side contended that if the owner of bees refused or neglected to treat the disease, he was violating the law, and should therefore be penalized, and that the loss of his bees would be the penalty. Then, if the law provided for paying for the bees destroyed by the inspector, we would make it harder for the Bill to pass.

A business session was now held. The following officers were elected for the ensuing year: President, J. H. M. Cook, of Essex Falls; 1st vice-president, E. G. Carr, of New Egypt; 2d vice-president, Wm. E. Housel, of Junction; 3d vice-president, W. W. Case, of Frenchtown; and secretary-treasurer, Albert G. Hann, of Pittstown.

The following was elected to attend the meeting of the State Board of Agriculture, as our delegate: W. W. Case; alternate, Harold Hornor. The delegate was instructed to try to secure the endorsement of the State Board of Agriculture for our Foul Brood Bill.

The retiring President W. W. Case was given a rising vote of thanks.

The minutes of the last Field Meeting were read and approved.

The secretary's report was read and adopted.

It was ordered to pay the secretary $25.00 for the coming year.

It was decided to hold another Field Meeting in one of the northern counties of the State.

The meeting adjourned, subject to the call of the Executive Committee.

ALBERT G. HANN, *Sec.*

National Bee-Keepers' Association

General Manager, N. E. FRANCE, Platteville, Wis.

The membership of the National today (Feb. 19) is 3600.

The revised edition of "Bee-Keepers' Legal Rights" is now in the hands of the printer. A copy will be mailed free to any member requesting it.

There have been two or more recent cases of bee-keepers sending in their dues, and asking for help *after* getting into trouble. This is contrary to the constitution. No imsurance company insures burning property.

There ought not to be very much trouble in getting the desired 5000 membership by the time of the National convention of 1910. There are now 3600 members, so that only 1400 more would be necessary.

Director R. A. Morgan, of South Dakota, suggests that the National issue reports quarterly instead of annually, and save postage; also the more frequent reports will help create more interest among the bee-keepers.

Director J. E. Crane, of Vermont, thinks it would be a good thing if the National would own and rent to members stereopticon views for bee-lectures, and thus better advertise the use of honey; and also have the National advertise in papers.

Invitations for the 1910 meeting of the National have been received from Toronto, Can.; Buffalo, Albany, and Rochester, N. Y.; Nashville, Tenn.; and Zanesville, Ohio. The Executive Committee will not decide as to the time and place of the next meeting until, perhaps, June 1st, so there will be plenty of time for other cities to get in their invitations to the General Manager before the final decision is made.

The Executive Board asks any one to report to Pres. York or the General Manager any suggestions as to how the National Association can be of more help to its members. Several suggestions have been received already, but others are wanted.

Thos. Chantry, of Utah, suggests that the dues of the National be increased so that there would be more money in the treasury, for use in the interest of the membership; and he would urge every present member to get in new members for the National.

Those who are in arrears in their membership dues are kindly urged not only to remit at once to the General Manager, but also, if possible, to get their neighbor bee-keepers to become members also. In this way the 5000 membership could be gotten within the next 60 days. Why not do it?

The poison spraying of open fruit-bloom in the Southern States has begun, as some apiaries are already affected by it. Complaints of bees spotting the washings hanging on lines in the South are coming in. The North will have similar complaints later. The long, cold winter is liable to cause much spotting of washings when bees have their first flights. The bee-keepers should try to plan the wash days, and place their bees out afterward.

The Wisconsin State Bee-Keepers' Association was the first to join the National in a body, and has ever since continued to do so. It was also the first this year to vote to send a delegate to the National convention of 1910. Let other State and local associations do likewise, and build up both by so doing.

Up to this date (Feb. 19), since the last National report was issued, the General Manager has received $1.00 each as dues from 80 members, and 50 cents each from 545 members. This far exceeds any other year for 50-cent dues, which shows that the local associations are co-operating very nicely. The 50-cent rate to local associations, when joining in a body, helps the National both in number of members and financially.

It has been suggested that the time and place of the bee-keepers' conventions throughout the whole country be arranged with the Executive Board of the National Association. If this is done, it may be that dates can be selected when certain officers of the National can be present at nearly all local meetings. Also, it may be that a system of meetings for the good of all can be planned something like the various State Fairs in the fall.

Honey as a Health-Food

This is a 16-page honey-pamphlet intended to help increase the demand for honey. The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last part is devoted to "Honey-Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed *free* at the bottom of front page on all orders for 100 or more copies. Send all orders to the office of the American Bee Journal.

Langstroth Book "Special"

We have about 30 copies left of the book, "Langstroth on the Honey-Bee," of the edition just preceding the last. It is practically equal to the latest edition, and we will mail them so long as they last, for 90 cents a copy. (The regular price is $1.20.) Or, we will send one of the above 90-cent copies with the American Bee Journal one year—both for $1.75. Address the American Bee Journal office.

Worth Many Times Its Price.

To one who takes an interest in honey-bees, the American Bee Journal is worth its price many times over.

Tacoma, Wash. P. A. NORMAN.

(*Continued from page 80.*)

like those described before. Give me your opinion as to their value, and how you would pack them for wintering.

2. Is it possible to have honey stored in supers without separators wiht the 4¼x4¼x1⅞ inch boxes?

3. The woman mentioned before said that it was never necessary to feed bees anything to winter on, because they always filled the brood-chamber before they started in the supers. According to her, if the bees stored one pound of surplus they had their brood-chamber filled. She claimed to have worked in the apiary helping her husband. Is she right or wrong? NEW JERSEY.

ANSWERS.—1. Bees work in any kind of a thing as to choice in hives is the convenience of the bee-keeper. An important thing in deciding as to the kind of hive to use is whether it is commonly enough in use to be easily obtainable. Especially is that true if a larger number in the future is likely to be needed. If you have something that is not in common use, it will be difficult to buy others of the same kind, and you can generally buy cheaper than you can make. Also, if you ever want to sell, the sale will be more difficult in odd hives. The most important thing about the hive—the size of the frame—you do not give. If it is some odd size, it is decidedly objectionable. I had hives with frames only ⅜ of an inch longer and ⅛ of an inch shorter than the regular Langstroth frame, and I threw aside a hundred of them to adopt the standard size (17⅝x9⅛). Without knowing more definitely about them it is hard to judge as to your hives, but from what you say I strongly suspect that they are in a class by themselves, in which case you would do well to adopt something more nearly standard.

The hives being double-walled may need little packing. If you can get at it, the 4-inch space might be filled with leaves, shavings, chaff, straw, or other material to maintain warmth, with what is of more consequence, a packing of a little greater depth on top.

2. Yes, and for home use it is just as well. Even for a home market it may do. But for shipping to a distant market separators are almost a necessity, for without them the sections are likely to be so irregular that they will not pack in a shipping-case without interfering and causing leaking.

3. As a general proposition she is wrong. The brood-chamber may be filled before anything is stored in the super, then the bees may store a small or a large quantity in the supers, and starve before the winter is half over. For the brood-chamber may be mostly filled with brood—generally is—when storing begins in the supers, leaving empty combs when the brood is hatched out, which must have honey stored in them for winter. However, the size of the hive has something to do with it. With 8-frame hives it often occurs, especially if there is no fall flow, that bees store well in supers and then need feeding for winter. In this regard larger hives are much safer.

Marking Queens with Color—Uniting Colonies—Forming Nuclei—Boiling Beeswax—Transferring Bees.

1. Why not mark the queens with color so that they may be easily and quickly found, even in a big colony?

2. I have 2 colonies of common or black bees which I here will call "A" and "B." Colony "B" I obtained and transferred last fall from a bee-tree into a standard hive. It was a small or weak colony; but it seems to be more industrious, and more gentle and with a larger queen. And so it is my choice colony which I would like to breed from. Colony "A" is a big one. How can I best build up colony "B" in the spring to be a big one?

3. How will it do to sprinkle with flour when uniting bees?

4. How will it do to use a fine spray of water to unite bees?

5. In "A B C of Bee Culture," in the Somerford method of forming nuclei, how about that queen that is to be removed and kept caged for 10 days? Is it all right to keep her in the cage alone, or must there be several worker-bees with her? Must she be provided with food in those 10 days, such as "Good candy?" How about the temperature for her in the 10 days? Will it be well enough to place the caged queen, for instance, on a shelf in the dwelling in those 10 days?

6. When after 10 days the queen is returned to her bees, will the bees accept her readily, or will they consider her a stranger?

7. If in the hives there are some brood-combs that have been transferred into the frames, and there are also some brood-combs which are built on full sheets of foundation, how may I best manage to remove or dispense with those transferred brood-combs, as they are inferior?

8. Is beeswax injured by coming to a boil? If so, can it be detected that the wax has been boiled?

9. Is it a favorable time to transfer from bee-trees during the time of fruit-bloom? WISCONSIN.

ANSWERS.—1. I don't know of any objection. It is practised quite a little in Europe.

2. Just what is the best way depends on the strength of B. If it is very weak, able to cover only 1 to 3 frames of brood, there are two ways to proceed, either or both of which you may use. One is to take from A, a frame of brood with adhering bees, being sure not to take the queen; then to shake or brush the bees down in front of B, trusting the older bees to fly back to their old home and the younger ones to crawl into B. After 2 or 3 days the dose may be repeated, and at intervals afterward. The other way is to swap frames of brood, without taking the bees. Take from A, a frame of brood that is as much as possible sealed and swap it for one of B that is mostly eggs and very young brood. You may continue swapping in this way just as often as you can find in A frames of brood more advanced than those in B.

If B has as many as 3 frames well filled with brood, or when you have made it as strong as that, you may work more rapidly. Take from A, a frame of the ripest brood with adhering bees, and give to B. Within a week this may be repeated. After B has as many as 5 frames of brood well covered with bees it can stand having 2 frames at a time given to it. If you give bees too rapidly while it is weak, there is danger to the queen.

3. It is practised a good deal in England, but for some reason not much in this country. I think some have reported favorably, and some not.

4. I don't believe it would do very well.

5. The article in question having to do with making nuclei, little was said about the queen, only she was to be kept out of the hive for 10 days, and then returned. Generally she would probably be kept in a nucleus of perhaps 2 frames of brood with adhering bees. She might also be kept caged with a retinue of bees, candy being in the cage, or she could be in the cage alone if warm enough, say 70 degrees or more. In the latter case she might be kept in the house.

6. They are not likely to make any objection to her.

7. Merely remove them and put frames filled with foundation in place. If there is brood in the removed frames, put it in an upper story over an excluder till the brood has hatched out. Do not alternate the foundation with the brood-combs already present, but put the foundation at one side together. You will get straighter work if you put a thin dummy between the combs and the frames of foundation.

8. Bringing to a boil will hardly hurt it if not repeated too much, nor continued too long, and I don't believe the short boiling could be detected.

9. Yes, very.

Wintering Bees in a Nail-Keg—Comb Honey and Increase—Bee-Keeping in Washington.

I have a swarm that I caught last May and put in a nail-keg, and they seem to work well, filled the keg with comb, cast a nice swarm in July, and had a good flow after that, but I don't know how much honey they went into winter with; but the other day I noticed that some 12 or more bees had come out of the keg, and had chilled in the snow, and every day since I can see several come out and spin around on the snow and never get back, for the days are cold. What makes them come out? Do you think they are short of stores?

2. I have them on the summer stand with a piece of burlap wrapped around the keg, with a ½x5-inch entrance. Do they get enough air?

3. If they are short of stores can I feed them? How is the best way?

4. If they were in a frame hive I could soon see if they had any honey. I want to transfer them in the spring. When is the best time, and how is the best way?

5. I want to run for comb honey and get all of it I can, and get all the swarms I can. How is the best way to manage it?

6. Would you use the 8 or the 10 frame hive?

7. We have a very good honey-flow here. It lasts about 3 months, from June 1st to the last of August. We have a milk-weed that is very nearly as good as white clover, smells like clover, and the honey tastes very much like it, but not quite so white. Then there is some alfalfa raised here, and more sowed every year, so I think this will be a good bee-country after a while, for it is new now. Is there a bee-keepers' association in this State, and where are the headquarters?

8. What books would you advise for a beginner? WASHINGTON.

ANSWERS.—1. The bees coming out as you say, spinning around and dying on the snow, is no sign that anything is wrong. If they were starving they would die in the hive, or at the most they would get no farther than close to the entrance. More or less bees always die through the winter.

2. That ought to give enough air.

3. It's a troublesome thing to feed them; but you can put some comb honey under the combs on the floor, and the first day it is warm enough they can take it.

4. Wait till they swarm, hive the swarm in a movable-comb hive, setting it on the old stand with the nail-keg close beside it. A week later move the keg to a new place, perhaps 10 feet away. Two weeks later still, or 21 days from the time the swarm issued, all the worker-brood will have hatched out in the keg, when you can cut up the keg, brush the bees into the hive containing the swarm, and melt up the combs. Instead of this, however, as you probably want increase, you may, at the end of the 21 days, cut out the good combs and fasten them in frames as directed in your bee-book, and transfer bees and comb into a new hive.

5. If you get all the honey possible, you will not have any swarms, unless you are in a locality where the season is long and there is a heavy flow late. If you have as many swarms as possible, you will not expect much honey. Perhaps the happy medium will be to double your number. When a prime swarm issues, set it on the old stand with the old hive close beside it: move the old hive to a new stand a week later, and that will throw the field-force all into the hive with the swarm. That will make the swarm strong for a crop of honey. If you are anxious for more increase and less honey, when the prime swarm issues hive it and put it on a new stand, leaving the old hive on the old stand. Then, if the colony has been strong, you may have another swarm from the old hive about 8 days after the first swarm. Set this second swarm on the stand of the old hive, and move the old hive 10 feet or more away.

7. Write Legh R. Freeman, N. Yakima, Wash., who will be able to tell you about the Washington State Bee-Keepers' Association.

8. Dadant's "Langstroth on the Honey-Bee," Root's "A B C and X Y Z of Bee Culture," and Cook's "Manual, or Bee-Keepers' Guide," are all good. After one or more of these, may come any of the other books advertised on another page of this paper.

Cellar-Wintered Bees—Milkweed—Bees Superseding Clipped Queens—Eggs that Disappeared.

1. Last winter I had my bees in the cellar with a bottom-board 1¾ inches in depth of opening under the hives in front, but with it all closed except about 1½x3½ inches, with wire-nails placed close enough together over the opening to keep out mice. I had also a cork hole less than an inch in diameter in either the front or back end of each hive about 1-3 from the top, closed with a mouse-proof tin stopper in 10-inch deep Danzenbaker hives, with the frames set crosswise, and lost none by wintering in the cellar under the living room of the house. Although this winter has been very mild for Ontario, Canada, till now (February), I can't keep the cellar so warm as last winter, and have had it down to 41 degrees a couple of times, and from that to 45.

I should have said that last winter the cotton covers were mostly free from propolis, and over these 4 or 5 thick quilts, either of felt or cut from bed-quilts, covered with weighted wire or zinc screens to keep out the mice.

This year I have taken the plan given by Doolittle and left the opening all the way across on the bottom-board, about 14x1¾, with ⅜-inch galvanized wire screen mouse-protector, and the cork-holes closed entirely. All the hives have the same quilt covering now as they had last winter, only the propolis was not removed from the cotton summer covers, but they were moved too late for the bees to seal them down, and these are covered over all with the Root ⅜ zinc-bound "honey-boards."

Now, why is it that under the board covers the quilts are quite cold? Not the slightest heat can be detected over the cluster. I examined only 2 in the top row on the east side of the cellar that were easiest to get at. The bees on the west side of the cellar make less than half the noise of those on the east side. I suppose because the cooking stove is within 3 feet of the top of the hives on the east. Are the quiestest bees not wintering the best? There are not so many dead bees on the floor as at the same time last winter. I examined some of them with a lamp, holding it close to the entrance, and not a dozen dead bees were on the bottom-board, and not a bee came out in the few seconds I was there. Are my 14x1¾ entrances too large? Probably they are more than 4 times the size of Doolittle's, but they can't be as bad as those hives wintered with no bottom-boards at all, all open, set upon a 4-inch scantling, and come out fairly well. I could partly close the slide easily, instead of having it removed entirely, as it is now.

2. When I tried incubating, as I informed you, with a lamp under a hive, in the house, with exit under the window in the spring of 1908, it worked well, because any extra heat escaped into the room and did no harm, but in the spring of 1909 I put a lamp in a hole dug in the ground, surrounded it with a topless and bottomless box and set 4 hives upon it for a top, but I could not keep the heat low enough without having the lamp go out, and after moving them to proper stands when the weather got warm, only the weakest colony of the four did any good. One of the stronger ones swarmed before its time, from too much heat, but the swarm and the other three did not, all together, give more surplus than the weaker ones. Buckwheat and goldenrod gave most surplus unless the large milkweed helped. I saw many bees working on it and some of them would sit on its leaves as if they were half asleep. Did you ever have any experience with this milkweed? It is getting to be more of a nuisance every year.

3. I was reading in the last Report of the National Bee-Keepers' Association, first column of page 54, that a Mr. Bernschein said he always loses half his clipped queens by superseding in the spring. I have always clipped my queens, and have had the same trouble at other times of the year, but last spring the queens were killed at the most critical time, when they should have been breeding for the white honey-flow. Is this a usual thing for the bees, to kill clipped queens? I have long been trying to account for the loss of so many queens by superseding, and I think I told you of it once. This has happened so often that all my bees are hybrids, though buying queens every year. If you tell me this is usual I shall clip no more, except as an experiment. Every bee-keeper should join the National to get its full reports, as the bee-papers could not publish the reports in full even if they tried, and the General Manager, N. E. France, of Platteville, Wis., is such a splendid, enthusiastic man.

4. Lately I tired of the way some dealers in Italian queens humbugged the people by making them believe that the filthy combs frequently built by Italian bees were caused by "travel-stain," as they call it, when it is caused chiefly by the Italians mixing in pieces of old, dark comb with new wax in building new combs, so I decided on trying Carniolans that are reported to build white combs. I procured some Carniolan queens in October, one of which I introduced as follows, on some one's recommendation in the papers:

I first smoked the bees heavily below, and closed the entrance, then pounded on the hive to make them fill themselves with honey, and then laying a large board in front of the hive-entrance, I shook off all the bees from the combs on to the board and let them run into the hive, and they soon collected on the combs again that had been returned to the hive, and the queen had been dropped amongst the bees outside the hive and ran in with them. In a few days there were eggs in part of one comb and soon after no eggs or larvæ were visible, and in a few days after there were more eggs, but these also disappeared shortly after. What became of these eggs? Did the bees destroy them because it was too late in the season to rear brood, or what? "I don't know." Probably you do.

NOVICE.

ANSWERS.—1. You are to be congratulated. Your bees have such an abundance of good air of the right temperature that they do not need to make any stir to change the air nor to warm it, so they are so nearly dormant that you can feel no heat over the cluster. What more do you want? Of course, the quieter the bees are, the better. My hive-entrances are 12⅛x2, making 24¼ square inches. Yours are 14x1¾, or 24½ square inches. Your entrances are all right. If you want to warm your hand over the cluster, make the entrance so small that the bees will have to ventilate to change the bad air, and the effort to ventilate will help warm your hand. Or, lower the temperature of the cellar below the freezing point, and the bees will have to stir themselves and eat a lot of honey to warm up the cluster, and then it will warm your hand on top. Sounds contradictory to say that cooling the cellar warms up the cluster; but it's about the same as saying that as the weather gets cooler the fire in a sitting-room gets hotter.

2. Milkweed is rather plenty here, and I think I have seen a very few sleepy-looking bees on it, but the greater trouble is that sometimes the bees are thrown out of business by having parts of the flower stick to their feet. The Chapman honey-plant is the worst I ever knew about having a number of bees sit stupidly upon it.

3. I think every one who begins clipping queens will be surprised at the number of queens that are superseded. It is not that any more queens are superseded than before he began clipping, only while wings were whole he could not well tell whether they were superseded or not, and when he finds a queen with whole wings in place of a clipped one he knows there was superseding. Ask him how many of his queens were superseded before he clipped, and he might answer, "I don't know, but I don't suppoce one in twenty." The actual fact is that in the regular course of nature *every queen is superseded.* I have clipped for a great many years, and have had a good many old queens, and I don't believe I ever had a queen killed because her wings were not whole.

4. I doubt that Italians are worse than others about taking bits from their old combs to put into new. At any rate I've had blacks and near-blacks that were just as bad.

I think it is the usual thing that a queen continues laying at least a short time after the bees stop rearing brood from her eggs But bee-keepers don't often notice it."

A Big Bunch of Bee Questions.

1. Can I take bees without a queen a distance, give them a frame of brood with a queen-cell, and get them to stay and increase to a full colony?

2. I made a hive the other day that has 8 rooms in it, 4 frames to the room, only one room has 10 frames. Over each 4 brood-frames are 4 honey-frames on top. The 10-frame room is to run for honey and drones, so they may have a better chance at the queens. Will that hive be a good one to rear queens in?

3. There are no black bees within a mile and a half of me that will interfere. As I use drone-traps do you think I will ever have a good stock of Italians?

4. Are hybrids as good for honey-gathering as full-bloods?

5. In caging cells, one cell in a hive, with no queen, will the entrance of the cage have to be closed to keep the bees from tearing it out?

6. A bee-friend says a pound of honey will go as far with a colony of bees as 2 pounds of granulated sugar for winter. Is that so?

7. He says the workers lay the drone-eggs. Is that so? I thought the queen laid all the eggs.

8. He has 50 colonies and has had bees 20 years. I have 10 colonies and have had bees 2 years. He says he thinks the bees know when a queen gets to be too old, and will rear a young queen when it is needed, whether they swarm or not. Another bee-keeper with 40 colonies said he had a box-hive with a queen that had been in it for 20 years. I believe they are both mistaken. What is your idea?

9. Can I confine a young queen in a hive and have her mated without taking a flight?

10. Will it make any difference for me to get golden Italians and red-clover Italians, and let them mix, or would I better keep only one kind?

11. Which of the two kinds mentioned do you think better for my locality, and will the Italians beat here? Our chief honey-plants are poplar, blackberry, cherry, locust, sumac, white clover, raspberry, catnip, bitterwood, maple, buckwheat, etc.

12. If I cage queen-cells, must I hang them as they were in the hive, or can I lay them down in the cage?

13. How many can I cage in a queenless colony and have the bees feed them as they should?

14. How is the best way to make queen-candy if I should need it for my yard, as I am going to rear my own queens if I have luck.

15. I have 10 colonies of bees and want to increase to 28 this year. I can buy prime swarms for $1.00 to $1.25 each. Would I better let mine run for honey or let them swarm once each? Chunk honey is 10 cents a pound here.

16. I have Italians and blacks. I want to get pure Italians and keep them, and also keep pure blacks. How will I manage it?

17. I am going to move some of the blacks to an out-apiary, but do not want to move all. Can I catch and kill all the black drones in the home apiary, and rear my Italian queens in July and August? How would that do?

18. What good are drones to a colony that has a mated queen? Will it hurt if I kill all drones in such a colony?

19. What is the gentlest race of bees you know of?

20. What race of bees has the longest tongues?

21. What is the best way to select a young queen before her brood hatches?

22. Which is the safest way to make a living, to work with bees or to run a farm? Which way will one have the best time?

23. I run my bees for extracted honey. When I don't find sale for it, how will it do to let the honey stay on the hive till I do find sale for it? How will it do to put a wire-screen over a strong colony and pile up the supers over this?

VIRGINIA.

ANSWERS.—1. If you move the bees a mile away, or imprison them for 3 days, if you take enough bees, and if it is a good enough season, you might succeed.

2. I'm not sure I understand just how the hive is made. I suppose several nuclei are to be kept in the same hive, separated by bee-tight partitions, in which you expect to keep young queens to be fertilized. If the entrances are so arranged that there is no danger of the young queens entering wrong compartments when returning from a wedding excursion, the hive ought to be a success. But if you have 4 full-sized brood-frames for each nucleus, there will be little or nothing gained. I question your idea about drones.

3. You may if you get a pure queen now and then.

4. Very often they are.

5. If a cell is given before the bees realize their queenlessness, they may tear it down; not afterward.

6. For wintering, a pound of sugar will go farther than a pound of honey.

7. In a normal colony the queen lays all the eggs. In a colony queenless long enough, laying-workers may appear, and their eggs will produce only drones.

8. Your friend is right about bees replacing a queen without swarming, and that is what took place several times in that box-hive, no doubt, for a queen generally lives only 2 to 4 years, and I never heard of one living more than 5 or 6.

9. No.

10. Generally it is considered better to keep only one kind; but a cross often does better, at least for a time.

11. Likely there is little or no difference, although if the red-clover bees are really what their name implies they ought to be the better in a red-clover region. Likely Italians will beat the blacks.

12. You may safely lay them on the side.

13. I don't know, but I suppose a great many.

14. Stir powdered sugar into warmed extracted honey to make a very stiff dough. After standing a day or two, if it becomes thin, knead in some more sugar.

15. At the prices you name, better produce all the honey you can and buy prime swarms.

16. Keep each kind in an apiary by itself, 5 miles away from any other kind of bees.

17. That ought to answer; only remember

that there is some chance of mixing at a distance of 6 miles or more.

18. No use. All right to kill them.

19. Caucasians have that reputation, although Root says they are no gentler than some strains of pure Italians.

20. Perhaps Cyprians.

21. I don't know of any way to judge except by her looks, the way she fills the frames with eggs, and the stock she comes from.

22. Most men will probably be safer as to a living on a farm. The man who is thoroughly qualified for it may be safer with bees. Such a man, with a strong liking for bees, will have a better time with them even if he should not make so much.

23. It will be all right to leave it on the hives until the weather becomes too cold. But if you use a screen, so the bees can not get to the honey, the moths will probably have "a high old time" with the combs.

Reports and Experiences

Lots of Snow—Fair Prospect

There is lots of snow here this winter. The prospect is fair for honey the coming season.
J. E. CRANE.
Middlebury, Vt., Feb. 26.

Seem to Be Wintering All Right

My bees were put in winter quarters Dec. 3, 1909. They are weak, but they seem to be wintering perfectly thus far. There are no signs of disease yet.
H. W. LEE.
Pecatonica, Ill., March 1.

A Very Cold Winter

We have had a very cold winter here. The bees have been under snow about 2 feet deep. The snow has gone now, and the bees flew today. Out of 15 colonies I have only 3 left.
JAMES H. KNOTTS.
Tunnelton, W. Va., Feb. 28.

Bees Seem All Right

I have 80 colonies of bees, all in the cellar. They seem to be all right so far. The season of 1909 was a very poor one for honey in this part of New Brunswick. There was no surplus honey to speak of. Bees were put in winter quarters quite light in stores. I hope they will come out all right.
GEO. F. BEACH.
Meadows, N. B., Canada Feb. 21.

Bees Seem to Winter Well

Last fall I had 42 colonies of bees, and they were left on the summer stands. Today it was warm enough for them to fly, and they all seem strong yet. But I cannot say how many may die before the winter is over. I hope this year may prove a good one, as we have had three bad seasons for bees.
Martinsville, Ind., Feb. 15. J. A. LEWIS.

Coal-Oil to Keep Ants Away

The best way to keep ants from bees in summer is to plant as many posts in a row as needed for the hive bench to sit on, and then dig out a hole as large as a peck measure and cement it and fill the hole about ¾ full of water, and pour coal-oil on top of that, as much as a half-pint in each hole. I think all who try this will find it all right.
WILLIAM H. CLARK.
Sperryville, Va., Jan. 6.

Distance Bees Fly for Honey

I saw in the January American Bee Journal an article written by L. B. Smith, as to how far bees fly. I will tell of a little experience. Last fall, one warm day, my father and I went out towards the mountain bee-hunting. We came to an open place on a ridge that led to the mountain, where we put out some bait. In about half an hour we heard the buzzing of the bees, and sure enough one lit on the bait. So we watched the bait for several hours where we first put it out, and in that time we had several dozen bees on it. But we were unable to tell in what direction they were going, as they circled so high in the air we could not tell which way they led off. However, we supposed they flew towards the mountain. So we commenced to move the bait towards the mountain, the direction we thought they were going, and finally we started up the mountain, still moving the bait, time after time, until we got towards the top, when we commenced to see which way they flew, as they did not circle so high, and they led off to the top of the mountain.

We continued moving the bait, and the farther we went the more bees we had, until we got to the top, when night overtook us and we had to start for home.

The next day being my regular huckster day, I could not go back, but the next day we went to the top of the mountain where we left off. We put out some bait, and in a short time we had lots of bees, and they flew right down the other side. We commenced moving down the other side until we got down in the other valley, where we found them in an old oak-tree. I feel confident in saying the distance from where we first put out the bait to where we found them was between 3½ and 4 miles, as it was from one valley across a large mountain into another valley. So I believe in a time of scarcity they will fly as far as Mr. Smith says; but as to the amount of honey they will store I am not able to say, as that one had only about 2 pounds of honey. However, we have had a terrible drouth and pasturage was scarce. I hope to see this subject more fully discussed.
T. A. CRABILL.
St. Davids Church, Va., Jan. 25.

Bees Long Confined to Hives

This has been the closest and longest that my bees have ever been confined to their hives. They haven't had a flight for 8 weeks. They are on the summer stands wrapped in painted canvas, well protected from rain and wind. I can hear them humming in the hives. How do you think they'll pan out in the spring? We have 18 inches of snow this winter. It is an old-timer, away back in the 50's, and still snowing. I am anxious to see the bees out. Is it prudent to let them out on the snow, or should I keep them in the hive until the ground gets bare? I would like to hear from other bee-men.

I put 23 colonies away, and am waiting patiently to see the outcome of the close, hard winter.
C. H. MANGUS.
Altoona, Pa., Jan. 31.

Cold Winter for Bees

I have been at bees for 30 years, keeping only 8 or 10 colonies, as I never allowed myself to have enough colonies to interfere with my pastoral work. And for that reason, and because I have never gone into serious commercial honey producing, I have kept to comb honey.

I have been pastor here 11 years. In that time I have not failed to get 100 pounds of comb honey in Danzenbaker sections every year, per colony, until 1909, when all was black honey-dew—not a single section of clover, basswood, or other white honey. And now this is a very severe winter on out-door bees, since many feared to house them in the cellar with no chance to fly when they had no stores but honey-dew.

All this long lying snow will be good for 1910 clover, but I believe many bees will be lost this winter between honey-dew and cold continued so steadily that they cannot warm up and eat, to say nothing of taking wing. We have had 6 weeks of unusual cold here.
Rev.) T. CHALMERS POTTER.
Glasgow, Del., Jan. 18.

No Trouble in the South from Granulation of Bulk-Comb Honey

In the January number of the American Bee Journal, page 13, Mr. Greiner, in commenting on our Texas bulk-comb honey-production, seems to think we would have some trouble with our honey granulating while in the pail or receptacle, and "that he would be a little skeptical in filling the interstices with extracted honey." I have been selling bulk-comb honey since 1884, and have never had any trouble along that line. In fact, our honey does not granulate until the cold weather sets in, and I have never been able to supply the demand for nice comb honey during the summer and fall months, for it is invariably all sold out before the weather becomes cold enough to granulate our honey. I have known a few grocers to buy in 5-gallon cans, and set it away out of sight of their customers and have it granulate, but when put up in one or one-half gallon tin-pails, and put where it can be seen, it is all sold before it granulates.

If Mr. Greiner will fill some of his pails with honey without filling the interstices with extracted honey, and show it to his customers, he will soon know which sells the best. They like it "soppy," as they call it.

The most salable receptacles are half-gallon and gallon buckets made of very light tin, as that kind is the cheapest, and can be sold at the same price per pound as the honey. Some of our bee-men use quart and half-gallon fruit-jars, but unless the combs are cut in very small pieces, they are hard to get into the jar, and much harder to get out. Also, the jars cost so much more than the tin, and are more easily broken.

Besides all these advantages that the bulk comb has over section-box honey, we are not bothered with so many fixtures in its production. Only a plain, shallow extracting super, with a 1 or 2 inch starter to each frame is all that is necessary; and, also, I find it so much easier to get the bees to work in these shallow frames than in the little 1-pound boxes.

I also found it much easier to get the bees to work in the 2-pound boxes when separated with slatted separators, instead of the slotted or scalloped separators. The little slats are fastened at the ends by tin strips bent over the ends of the strips. This gives the bees free access to all the boxes, and they do more storing than they otherwise would, unless the separators are left out altogether, but we frequently have had a bad mess of it without the separators.

I get the bees to build comb and store honey in these shallow frames when there is a light flow, and then they will not start in the deep frames.

I use the common Langstroth frame in the brood-chamber, and with the 10-frame size I seldom have brood in the supers. When I do, I use the combs for extracting, which are light and easily handled.

Our bees are carrying in pollen now from the chaparral and cedar, and as the plum buds are swelling, the bees will soon be at work on them.

The rest of Mr. Greiner's article on winter packing does not interest me this far South, for we never need to do anything of that kind here.
D. F. MARRS.
Lorena, Tex., Feb. 6.

Honey-Dew—Discouraging Outlook

This has been one of the worst years I have ever experienced in bee-culture. No honey, but some black stuff that looks like tar, and if there is one colony out of 20 living next spring, I will be surpised, as they have not flown since the first of December. Those that did not feed their bees will be beeless when next spring comes, and have a lot of depopulated hives. Nobody got any honey, so they have no honey for their buckwheat cakes this winter.

The bees did a lot of swarming in June, and the swarms were all dead before the cold weather was here. The outlook is not bright for the bee-keeper next spring.

I would be lost if the American Bee Journal would not come once a month. It is all right. I like to read, even if I have no honey to eat.
HENRY BEST.
Hibbetts, Ohio, Feb. 8.

Why Are These Things So?

In answer to G. M. Doolittle's article on "Why Are These Things So?" I would say because there are too many small producers of honey, mostly a class that, if they got a good crop of honey one year they will dump it in their home market for "any old price" the groceryman offers them, and then say, "Well, I have made so much on my bees this year." The cost of production is never figured. Some bring a first-grade of honey to market, and others not so good, and, suppose they sell it for 10 cents a section, or 11 cents a pound for comb honey, as has been done in this town, you will readily see that a first-class article will have to go begging for 12½ cents a section, or 15 cents a pound for comb honey. Then we must always bear in mind that the more people there are producing any one article individually, the harder it is to keep the price up.

If we look back to the years gone by when you could almost count all the practical bee-men on the tips of your fingers, and they had the field to themselves, then you could make something on honey. I myself have sold a fancy or best grade of section honey for 15 cents per section to the retailer not over 5 or 6 years ago, but the price is down now, and is likely to stay there for these reasons;

First, too many in the business; second, no combine or union; third, some States can, or do, produce honey cheaper than others; fourth, selfishness and mistrust also hinder a producers' union. Please bear in mind that I am not in favor of any combine or anything else that helps one side and crushes the other. A combine is one way to get better prices, but how are we going to get it?

The other way is to fall out; that is, to keep right on the same way producing honey until we find out that it is done only at a loss all the time, and quit the business. Then you will see the price go up again to a profit.

You say, see the price of eggs, butter and beef. I tell you, it did not pay to produce them, and the farmers went out of them. When grain went up they went to raising what would pay better. I, for one, had to quit the poultry business when grain went up to the high prices where it is. Although I am equipped to accommodate 800 layers, I don't think that I would quit until I had to. Maybe I will have to go to saving, so you will see that the trusts are at the bottom of it all.

Take the beef-trust for one. The investigation says they are entitled to a 15 percent profit, so I understand. Whether that is once a year or on every transaction I can't say, and I rather think it is the latter. Look at the enormous profit, and if per annum it is still greater than the law allows a money-lender.

I will say there is yet a living price for me in the production of honey, or in other ways I get out of it all I put in, which I did in the poultry business.

I hope that the spirit of good fellowship will enter every man's heart, and that God will bless us and our bees.

LEWIS A. OERTEL.

Gloversville, N. Y., Jan. 28.

Poor Season in 1909

Last year's honey season was a very poor one in this part of the country. There was no white clover honey, though considerable blossoms, but the bees paid no attention to them. There was lots of honey-dew, and a little white honey in the fall. The winter losses of the bees are very heavy.

Rushville, Ill., March 2. W. E. MASON.

Apiarian Experience and Admonitions

I have kept bees in a small way for a period of about 20 years, and will give some of my experience, and try to give some admonitions that ought to be a benefit, especially to the beginner or those contemplating bee-keeping.

As intimated, I have never been an extensive bee-keeper, but have kept from 6 to 45 colonies in connection with farming, and for the benefit of those contemplating bee-keeping, I will say that in proportion to the amount of capital invested and time consumed, my bees have paid as well as or better than anything else on the farm, besides furnishing to me pleasure and an experience worth many dollars.

I have kept bees in three States: First when a young man in central Illinois, when I supposed all one had to do with bees was to hive the swarms and "take out" the honey (and it is a fact detrimental to bee-keeping, that a great many who keep bees still have the same idea I had then); second, in central Arkansas; third, in Kansas; and at last I have again got back to Illinois within 100 miles of the beginning place. So last fall I bought 9 colonies of bees as a starter, and being very busy and getting very sick later, I neglected to fix them for winter, as I had anticipated (and which no bee-keeper should neglect), and as the cold has been severe and continued, I fully expected my neglect to cost me the price of the bees. But since the weather has moderated, I find they are alive, even to a late swarm that is in a double-walled hive, which had only about one-fourth of the brood-chamber filled with comb, and which I had aimed to unite with a colony last fall. As they had fared so well I concluded to try to save them so as to have the queen in the spring, so I fed them a few pounds of sugar syrup a few days ago. And here it might be in order to admonish the beginner, who perhaps did not take the pains to see that each colony had an abundance of stores last fall, that when he can catch an occasional warm day, it would be a good time to peep into a few colonies late each evening so as not to excite any robbing) and feed any colonies that might be short of stores. Perhaps some of the best colonies stored about everything in the super, and when you took that off they had about half enough to winter on, and so may perish. Many of the best colonies are lost in this way by the careless man. A very satisfactory way to feed them is to slip out 2 or 3 frames and fill one side with sugar syrup. You can use less frames by filling both sides, but lay the side you have filled over an empty frame while you fill the other side. The worst objection to this method is it is a little hard on the man who wants to sell his bee-feeder. There is danger of the beginner thinking he must buy everything advertised before he can keep bees. When I first went to Kansas I supposed I could not keep bees unless I had a cellar or double-walled chaff-hives. But during a term of 7 years I wintered my bees by putting a cheese-cloth over the brood-frames, and then put on the super filled with dry leaves, and made a wind-break of fodder on the west side. I did not lose a colony in 7 years by this method, and we had as low as 24 degrees below zero. So to any bee-keeper no farther north than a line running through central Kansas, Missouri, Illinois, and so on, this is as much expense as he really needs to go to in order to winter his bees successfully in single-walled hives on the summer stands.

Here it might be interesting to note that the only colony I ever lost from cold was in central Arkansas, the cause being we had a cold spell of unusual length and severity for that climate, and the bees could not break the cluster to get to a new supply of honey; and having consumed the honey on which they were clustered, they perished surrounded by plenty of stores. This was the best colony I had in a lot of 40.

Moultrie Co., Ill. E. G. HANNA.

Chunk Honey—Bees Wintered Well

I notice in the discussion of chunk honey, one writer said that he believed the dealers in bee-supplies were discouraging it in order to sell goods. We don't like to hear people slandered that way. Such is not the case in this country, at least. We have two customers who like the chunk honey, but the majority claim it is not so neat for the table, and they dislike to have the candied honey which is in the bottom of the vessel. We try to have some chunk honey each season, but last year was almost a failure with us of any kind.

We have the section-holders with a strip of wood on top, and by taking thin super foundation one can put in a starter. My brother made the pieces first; they can be used for several years. These pieces of honey can be put in a tight box, and kept just as easily as in sections. We find that there is from a pound to a pound and a half more on one of these strips than in four sections, but, of course, one must try to please people, which, sometimes, it is hard to do.

We have 43 colonies, but as the white clover was so near a failure, and we had an early frost, our bees did not pay expenses; but they have wintered well, and we are expecting to make something another season. Had it not been for the honey-dew we would have been compelled to feed our bees in midsummer; as it was, we fed only 120 pounds of granulated sugar.

OLLIE GREEN.

Worthington, Ind., Feb. 21.

Last Season Too Dry—Starting New Bee-Keepers

The season of 1909 the spring flow was good, but the fall flow was the poorest we have had in a long time. It was too dry. I did not have to feed any; some of the best colonies filled one super, but if it had been a good season they would have filled 3 or more, or an average of about 40 pounds each from the fall flow. The spring was the same.

I work for honey only, both comb and extracted. I have 10 out-apiaries, and expect to make more increase. I have a good home market, and it has outgrown my supply. I think I will keep more bees and try to supply the home market.

I hope Mr. C. L. Grigsby, of California, will give the readers the description of his non-swarming methods, because the swarming season is on us; it will start here the latter part of next month.

I hope a more experienced bee-keeper than I will give us an instructive talk on the advantages and disadvantages of encouraging more people to keep bees. I have had some sad experiences in getting some people started. They did start—that is all. They got the best of hives and fixtures, but did not have time to read a bee-paper, or any of the bee-books, and have never studied anything on the subject. They said that it was no use; they had all the good, nice honey they could use, and some to sell. They just had the common black bees, and thought they were good enough, and that they could not afford to pay $1.00 or more for better stock. He may sell a few sections of comb honey, and, not knowing the market, let it go for less than it is worth, and it may not be graded right, and so hurt the market which we have worked so long to build up.

And, again, you have a home yard, and most likely you have some of your best queens there; you have worked for years to weed out the old box-hives and black bees for 2 miles around, and over, so that you can get almost all of your queens purely mated, and have an ideal place to rear queens for the out-apiaries. You have succeeded in doing so at no small expense; this is worth remembering, and as all preparations are made to requeen all your out-apiaries from your home yard from some choice queens, you are looking into the future and thinking you are in shape to do something in bee-keeping. You already have as many colonies as your location will support; but, behold, unexpected to you, here comes one of the "bee-keepers" that you have given some encouragement, with almost a dozen colonies, and puts them within a stone's throw of your apiaries. Of course, he has the right, and you can't help yourself. He has black bees and does not want any better, and does not know that there is a way to improve the stock. Try to get him to buy some good queens, and he will just laugh, and say that his bees make as good honey as yours do, and about as much. I can't see anything in that for me.

The above is from experience. I would be glad to hear from others on this subect. I say, give us better bee-keepers, and those who depend upon bees for a livelihood. There is not one bee-keeper in 40, through this section, who reads a bee-paper. What must be done? JOHN W. CASH.

Bogart, Ga., Feb. 21.

Transferring Bees—Do Bees Reason?

Last year was not a very good one for me. I secured about 35 pounds to the colony and increased from 8 colonies to 16, and doubled back in the fall to 11. The fall flow was very light. Bees stored very little over enough to winter on, but the prospects are good for this year. White clover is looking fine at this time.

I had quite a funny experience last summer. I had 5 colonies in box-hives to transfer. I transferred, or tried to, at least, one of them, and could not find the queen, so I opened another one, and did not find a queen in that one, but lots of eggs and brood in both, so I put all in one hive, but the bees all left and went to the other hives, so the man that they belonged to transferred the other 3 the next day, and out of 5 colonies he got only 2 medium colonies. But after I went into the first one I knew it would not do to transfer them, for there was very little honey coming in, but he had bought the Langstroth hives and would have them changed, but it was a bad job. It was the worst luck I ever had. I have made many changes, but those were the nearest to a failure I ever made.

DO BEES HAVE REASONING POWER?

I have seen this question in some of the bee-papers. I do not say they do or not, but I have taken notice of bees going to an old location and then going straight to the new one. Last summer I had 2 colonies on top of a house and moved them down on the ground about 100 feet away. It rained 2 days after I moved them, and for 4 or 5 days after they were moved I noticed bees coming to the old stand and circling around, and then going direct to the new location. Whether this is reasoning or instinct, I do not pretend to say. I would like to hear from some one who is better informed.

The bees in this locality have had a flight about every 10 days or 2 weeks all winter. I do not know what condition they are in, for I have not looked inside of any of them yet, but can soon. Soft maple begins to bloom here the last of this month.

Princeton, Ky., Feb. 5. L. S. DICKSON.

Bee-Stings and Rheumatism.

On page 419 (1909) Mr. J. D. Kaufman has something to say about bee-stings and rheumatism. He also gives us a query as to the riddance of vermin from his live stock.

With the creation of a cause, birth is given to effect. In the early seventies it was customary, in Wyoming, to rid wearing apparel of vermin by tossing the garment on a den of those big ants. Next morning the garment was free from the pest. Maybe the same cause produced the desired effect with his swine and collie. Again, maybe mica or alkali, or both, had something to do with the effect.

Here is one for the man of the Big Basin to crack: He says it is a long while since he saw an old fogy who pinned his faith to bee-stings as a remedy for rheumatism. I shall relate effects from my own experience. Maybe he can tell why it was that "Uncle Joe" got relief from the old pest—rheumatism.

In my younger days my occupation was that of mining coal. For 20 or more years my associates were those strong-armed and big-hearted fellows, who were not afraid to go down into the bowels of the earth and wrest from it the much-needed article—coal.

While engaged at my occupation among white and black damps, fires, and gas, mud and water, and such as the miner has to contend with, a something got hold of my arms, between the elbows and shoulders, which refused, many a night, to let me sleep in any position except with arms crossed above my head. The doctors told me it was rheumatism. I have good recollections, too, of their saying they could cure me. I paid the price, took the dope, and retained the plague, and now the family physician says no relief through bee-stings. They can fool me once, but not all the time. As we boys, years ago, would say, "More ways than one to skin a cat." Allow me to describe the first method of "skinning the cat," after the doctors had "skinned" me.

You should know coal-mining is a dirty occupation, a good place for perspiration and dust to mix and cling to the one who created the mixture; we needed a bath each evening, which needed to be taken with more than a grain of soap. How good and refreshed we felt after a good wash and a suit of dry duds on our tired bodies. When complaining to my good old mother-in-law about those sore, rheumatic arms, she told me that many a healthy baby was washed and bathed into a frail, puny condition; try less arm-washing. I did so, by omitting arm washing except Saturdays. One week's treatment and I had relief. Cheap, wasn't it? and easy, too; but hard on the washerwoman. To convince myself, I would return to the old way of washing arms, and so would the old pest return. Not a few times did I flit back and forth with the problem, but always with the same effect. I told others similarly afflicted, of my remedy. They would laugh, of course, just as you now are doing, but the torment was such that they gave it a trial. All reported relief. Who will tell me why it was so? Don't all speak at once. Let me say that, as a rule, the coal-miner is a clean man when not at work. I have read of one doctor who said the people bathe too much. With my experience I pin my faith tighter to that doctor than I will to the doctor who says bee-stings have no effect on rheumatism.

In the latter period of my under-ground experience, say some 6 or more years, I had no arm troubles, nor did I wash them oftener than once a week. Then through some hook or crook it came about that "Joe" was to toil on top of the ground instead of under and in it, amidst sunshine, birds, and bees, and the idea that "Old Joe" was to be where he could see the sun all day—well, if it was "Joe," he had lost his kit, if it wasn't "Joe," some one had found a blooming coal-digger, and here I am giving my bees the benefit of what was created along some lines while digging coal, the benefit of a well-regulated air-course across the bottom-boards with both ends open, which will furnish them with all the pure air they need while toiling for me and storing in my supers.

I got to be considerable of a clodhopper on the farm, but my old plague returned. What to do I knew not. I had no faith in the doctor's remedy, and my own I could not make use of, as wife said I had got so I didn't wash enough, so I grinned and bore it for a few years when (come, listen, you man from the Big Basin, also Dr. A. F. Bonney) "Joe" got acquainted with the bee, and he got stung unmercifully, too, for Dr. Miller had a standing order those days for the beginners, that the best remedy for a sting was a good stinging. I always believed in obeying orders, and I took the stings, and soon got relief from my plague in my arms, call it what you like.

After some five or more years I got wise; also tired of Dr. Miller's remedy, and took to protection along exclusive lines. I got practically no stings at all, but I did get a gentle hint of the return of the old Pest, and had him with his spurs on, too. Then a year ago the past summer I resorted to Dr. Miller's suggestions again, took the remedy in no small doses, either, for I had a whole yard of the demons ready to help drive away the plague, and "Joe" along with it. That summer I again got relief, and the past summer I saw to it that the protection was scant, and today I feel like—well, should a man come onto my place hooting the idea of the bee-sting being good for my kind of rheumatism, I believe I'd set the dogs on him.

The first summer with the bees my hands reminded me of a standing shaft in the mines, all there in one solid chunk, but tight between top and bottom. So after the last experience I am like the Indian who rescued the commander's daughter from an adjoining tribe who held her in captivity. When the rescuer returned her to her father, the father said, "John, I'm well pleased with your doings. You may make three requests and I'll grant them." John said, for first, "I will take whisky." "All right John, you get all you want of it as long as you live." For second he asked for tobacco, which was granted. For the third he said he would take more whisky. So if all are willing, I will take more stings and less of that pest. If the honey diet should afford relief, why did the pest return when I was eating it constantly? When we become positive a thing won't rope we should know what rope does, especially when the rope has the critter fast. J. P. Blunk.

Moorland, Iowa, Dec. 24.

Color of Wax-Scales Influenced by Pollen.

Editor American Bee Journals—Since returning home from the Chicago-Northwestern Bee-Keepers' convention, I have been thinking over the matter of the discussion of the question of the color of the scales of wax as they come from the wax-pockets, and am persuaded that the matter of the pollen, which is one of the most important articles of food for the bees, was not given sufficient consideration. You remember, great stress was given, during the discussion, to the different colors of honey; but, it was said that food cut no figure, for wax from buckwheat honey was of the very whitest, overlooking the fact that pollen from the buckwheat blossoms is of the very whitest also.

We know that cream and butter is colored a deeper yellow when the dairy cows feed on early summer grasses, while dandelion blossoms are plentiful; also, when fed on carrots. Again, beef cattle fed on yellow Swedish turnips will not only have the flesh tainted with the feed, but the tallow will be tinged with yellow. So, I believe, it is with the bees. Pollen, being an important part of their food, dominates the color in the wax. This explains why buckwheat honey is capped so exceedingly white. Whenever and wherever the prevailing pollen is yellow, the scales will be likely to partake of that color, and so of any other shade of coloring.

Once in Ohio, my bees, about 80 rods from a 15-acre field of goldenrod, standing as thick as though having been carefully drilled, put in a very considerable quantity of surplus honey from this field. The cappings were of a dusky yellow—not travel-stained but the wax was of that color. So I'm inclined to think that the wax-scales are not always white, as some think; nor always of a cream color, as some others think, but partake largely of the color of the pollen on which the bees feed. So that, where the flowers of a locality produce white pollen, there the wax will be white; where the flowers produce yellow pollen, the wax will partake of the same color. To contend over the matter, would be like the contention of the two knights over the color of a shield—both were right, and both were wrong. Wm. M. Whitney.

Batavia, Ill.

Hatching Chicks with Incubators.—While the American Bee Journal is not a poultry paper, yet so many of its readers are also interested in the raising of poultry, that we have decided to publish the following excellent article by that long-time poultryman, Mr. Robert H. Essex, of Buffalo, N. Y.:

Farmers are conservative in taking up new ideas; conservative in buying new things. They have to be. Nevertheless, when they see prospective profits oozing through the safety-valve of a new or improved implement, they feel that they must have it, even if they have to give a note for it, or encumber their farm with a new mortgage.

That's *farm progress*, which, interpreted signifies *prosperity on the farm.*

No farm can be complete, no farmer can be superlatively prosperous, where progress in labor-saving equipment is ignored. And this applies as well to incubators as to any other implement.

Where not many years ago 9 out of 9 farms had never heard of an incubator, today the word is passing from farm to farm that the profits are larger, the work less onerous, the hatches more sure, and the hens are taking fewer holidays—laying more eggs; not *all* on account of incubators, but primarily on account of the incubator, and secondarily on account of the large amount of book-knowledge distributed with it. The farmer's wife is doing her share in the profit-making. She always has done it; but now she is gaining recognition as a partner in the business. This is having—it has had—its effect, and the result is, farmers are now posted on poultry profits. They will continue to be posted; and those who have been operating incubators will go back to hen-incubation only when they return to the old custom of treading out the grain with oxen—only when they are prepared to put the cream separator on the shelf.

Poultrymen who are in the business commercially—whose living depends upon the profits—would as soon think of threshing the grain with the old-time flail, as they would of hatching chicks or ducklings with hens or ducks. The thought would be absurd. Without the incubator they would have to go out of business.

Before the introduction of incubators large commercial plants were an impossibility. Mr. James Rankin gets the credit of putting the first lot of ducklings and broilers on the market in considerable numbers, and making it pay. But James Rankin's only salvation was the invention of an incubator. Without its aid he found he could not make a business of raising poultry for market at a profit; so he made one.

That was many years ago. The incubator of today has improved as time has rolled on, but no more need be said regarding the future of the incubator (the built-to-hatch incubator) in the poultry business. Hens will continue to be used where only a dozen or two chickens are intended to be kept for home use; but on the farm where chickens can be fed cheaply and are raised by fifties or hundreds, the time-saving incubator, the economic method will be—is—adopted.

The farmer and his wife sometimes face a disconcerting situation when they have finally decided that they wish to get more of the poultry profits by buying an incubator. The question arises, "Which incubator shall I buy?"

I may advise them here except generally.

There are a number of good incubators on the market; and there are a number of built-to-sell machines that the farmer cannot afford to experiment with; but the present day farmer has his eye-teeth cut, and knows he cannot get something for nothing. To be successful in raising poultry one must use business-like methods with business-like equipment.

In buying an incubator go about it the same way you would if you were buying any other agricultural implement. I might advise again and again, but I cannot give better advice than that. Think it over; and be as particular as you would in trading horses.

Mr. Editor, when you personally know of poultry plants each using from 50 to 100 incubators; of plants hatching 40,000 ducklings in a single season; of fanciers hatching their New York-Chicago-Boston winners in incubators, and raising them in brooders, there's not much left for me to say. It is not evidence of the utility of incubators that is wanted, because anybody can get that in any down-to-date incubator manufacturer's catalog—evidence on the size of the poultry business; on the profits in the business; on the decadence of "mother" hen (unless the hen that lays the eggs is the mother); and the coming-into-her-own of the hen that never could be made to sit. That is all common knowledge.

I believe the farmer is lacking in confidence. That's all. Confidence that he'll get what he pays for. Yet, it is certain that he will get exactly what he pays for—*no more, no less.* Manufacturers' profits are not big these days. There's not much money in making incubators and brooders; and if the farmer and his wife exercise their judgment in buying and not expect to make "a silk purse out of a sow's ear"; they will certainly be successful in the purchase and use of down-to-date equipment for hatching.

That is the way to secure the bulk of the profits from poultry on the farm.

Buffalo, N. Y. Robert H. Essex.

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In Connection With The

AMERICAN BEE JOURNAL

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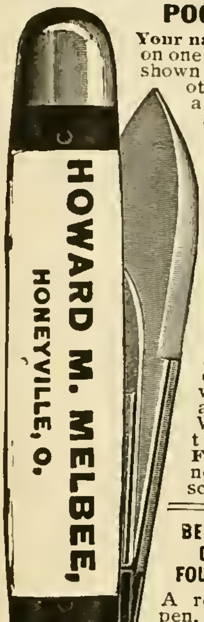
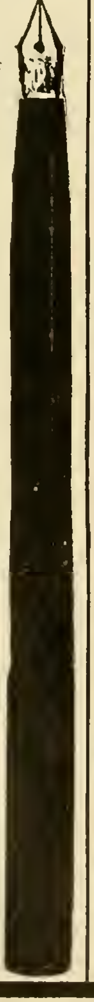
BEE-KEEPERS' NOVELTY POCKET-KNIFE



Your name and address put on one side of the handle as shown in cut, and on the other side pictures of a queen-bee, a worker, and a drone. The handle is celluloid and transparent, through which is seen your name. If you lose this knife it can be returned to you, or serves to identify you if you happen to be injured fatally, or are unconscious. Cut is exact size. Be sure to write exact name and address. Knife delivered in two weeks. Price of knife alone, postpaid, $1.25. With year's subscription, $1.00. **Free** for 3 new $1 subscriptions.

BEE-KEEPER'S GOLD-NIB FOUNTAIN PEN



A really good pen. As far as true usefulness goes it is equal to any of the higher-priced, much-advertised pens. If you pay more it's the **name** you're charged for. The Gold Nib is guaranteed 14 Karat gold, Iridium pointed. The holder is hard-rubber, handsomely finished. The cover fits snugly and can't slip off because it slightly wedges over the barrel at either end. This pen is non-leakable. It is very easily cleaned, the pen-point and feeder being quickly removed. The simple feeder gives a uniform supply of ink to the pen-point without dropping, blotting or spotting. Every bee-keeper ought to carry one in his vest-pocket. Comes in box with directions and filler. Each pen guaranteed. Here shown ⅔ actual size. Price alone, postpaid, $1.00. With a year's subscription, $1.70. **Given free** for 3 new subscriptions at $1.00 each.

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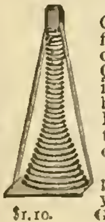

The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. 4½ inches high. It is used by many bee-keepers. Full printed directions sent with each one. Price alone, postpaid, 25 cents. With a year's subscription, $1.10. **Given free** for 1 new subscription at $1.00.

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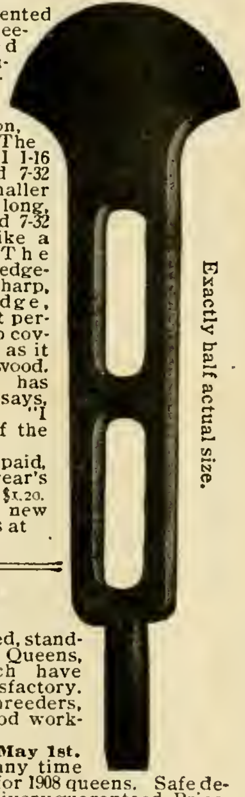

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A special tool invented by a Minnesota bee-keeper, adapted for prying up supers and for general work around the apairy. Made of malleable iron, 8¼ inches long. The middle part is 1 1-16 inches wide and 7-32 thick. The smaller end is 1 7-8 inches long, 1-2 inch wide, and 7-32 thick, ending like a screw-driver. The larger end is wedge-shaped having a sharp, semi-circular edge, making it almost perfect for prying up covers, supers, etc., as it does not mar the wood. Dr. Miller, who has used it since 1903 says, January 7, 1907; "I think as much of the tool as ever." Price alone, postpaid, 40 cents. With a year's subscription, $1.20. **Given free** for 2 new subscriptions at $1.00 each.

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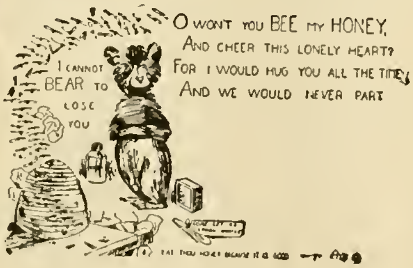
O WONT YOU BEE MY HONEY,
AND CHEER THIS LONELY HEART?
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AND WE WOULD NEVER PART
I CANNOT BEAR TO LOSE YOU

A "Teddy Bear" on good terms with everybody including the bees swarming out of the old-fashioned "skep." Size 3½ x 5½, printed in four colors. Blank space 1¼ x 3 inches is for writing. Prices—3, postpaid, 10 cents; 10 for 25 cents. Ten with a year's subscription, $1.10. 6 **given free** for one $1.00 subscription.

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Forty Years Among the Bees, by Dr. C. C. Miller.—334 pages, bound in handsome cloth, with gold letters and design, illustrated with 112 beautiful half-tone pictures, taken by Dr. Miller. It is a good, live story of successful bee-keeping by one of the masters, and shows just how Dr. Miller works with bees. Price alone, $1.00. With a year's subscription, $1.75. GIVEN FREE for 3 new subscriptions at $1.00 each.

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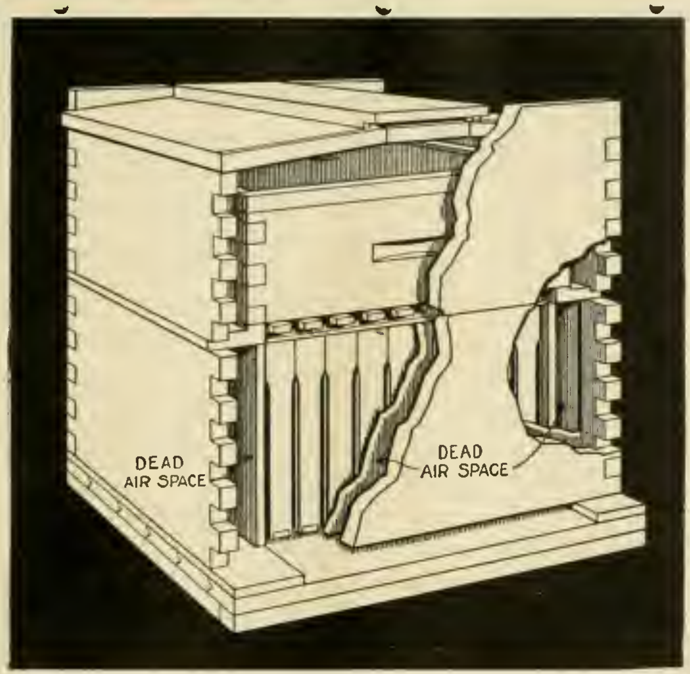

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Advocates Double Disking.—J. A. McGlynn, of Sidney, Montana, a prosperous farmer, wrote the Cutaway Harrow Co., Higganum, Conn., the makers of this famous tool, the following letter, which shows how useful a "Cutaway" Double Action Harrow is to them:

SIDNEY, MONT., Dec. 21, 1909.

CUTAWAY HARROW Co., Higganum, Conn.

Gentlemen:—Enclosed you will find a photograph of one of your A-6 D. A. Harrows at work on tough, heavy Buffalo grass-sod breaking, preparatory to sowing flax—photograph taken June 24, 1909.

I disked 75 acres for crop last spring, using 4 bronchos, and they handled it easily. It is a great improvement, even on double disking with the old style single discs, and I consider it the most valuable piece of machinery I have.

I send you this photograph, these statements, and a reference to pages 60 and 61 of Montana's Farmers' Bulletin No. 1 (in which your machine is mentioned), to lend force to the suggestions I wish to make. You have, no doubt, heard of the agitation or movement known as "dry farming." I am a "dry farmer." I consider this "dry farming" movement a great chance for you, and a world of good for the farmers. The bulletin referred to advises the use of your machine, and *all* lecturers on this subject advocate double disking. J. A. McGLYNN.

Full particulars regarding the Cutaway Tools, and their many uses, can be had by writing the Cutaway Harrow Co., 913 Main St., Higganum, Conn., and mentioning the American Bee Journal.

Ruby Nugget Tomato.—For several years the Golden Nugget, a popular yellow English variety of Tomato, has been grown, and has been kept quite pure. Two years ago, however, one plant produced bright red fruit which were a trifle larger than the Golden Nugget. It was so loaded with fruit that count was kept, and it was found that over 700 were produced on the one plant. During the past season quite a large field of this variety was grown, and it retained its characteristic branching habits, enormous yield, beauty and quality of fruit, which, while not large, is of exquisite flavor. The Iowa Seed Co., of Des Moines, Iowa, has exclusive sale of it this season, and are introducing it under the name of "Ruby Nugget Tomato." Believing that our readers would be glad to give it a trial, we have arranged with the above company to send a trial packet of about 25 seeds free to every one who wishes to test it. A postal card request sent to them is sufficient, *provided you mention the American Bee Journal.* They will also send a copy of their large illustrated seed catalog with the seed, if desired; but if you have their catalog for this year, please say so.

Wants and Exchanges.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

Bee-keeper's Exchange.—Those wishing to buy or sell, please send list of wants.
EDWIN EWELL, 704 Elm St., Waseca, Minn.

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Strawberries Lead to Fame!—Can you do one useful thing better than any other living person? If you can, you have a fortune within your grasp. Here is an example that illustrates the point:

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His first move was to find the best strawberry-growing soil in the United States.

Next, he bought the most select varieties of strawberry plants on the market.

Then he gave his thoughts and energies to producing new and more productive strains of strawberries. For 3 or 4 years Thomas kept "sawing wood," though nobody paid any attention to him.

But today—20 years later—nearly everybody knows of W. W. Thomas, the Strawberry-Plant Man. Thomas' strawberry plants are flourishing in every berry-producing district in the United States. Thomas' strawberries—rich, red and juicy—are in strongest demand in the great New York, Chicago and other world markets.

The best plants take up no more space, need no more attention, and cost little or no more than the ordinary kind. So address a post card to "W. W. Thomas, the Strawberry-Plant Man, 152 Main St., Anna, Ill." Tell him that you want his 1910 Strawberry Book and prices. Thomas is the authority on strawberry plants. His place is headquarters for strawberry information.

Engravings for Sale.

We are accumulating quite a large stock of bee-yard engravings and other pictures used from time to time in the American Bee Journal. No doubt many of them could be used by bee-keepers in their local newspapers, on their letterheads, on souvenir cards, or in other profitable or interesting ways. If we can sell them it will help us to pay for others that we are constantly having made and using in these columns.

We do not have a catalog or printed list of the engravings, but if you will let us know just which you want we will be pleased to quote you a very low price, postpaid. Just look through the copies of the Bee Journal and make your selection. Then write to us.

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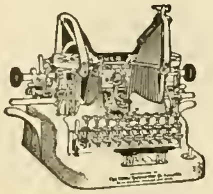

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Untested Queens	$ .75	$ 4.20
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Reared from the best 3 and 5 Band Red Clover Italian Breeder Queens.

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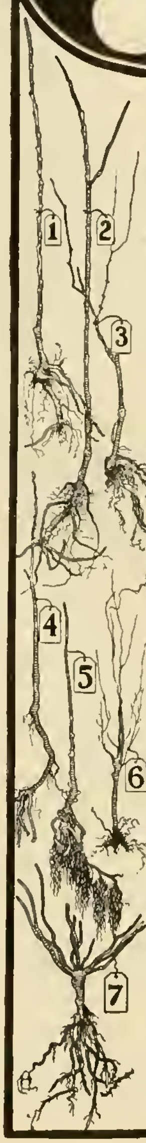

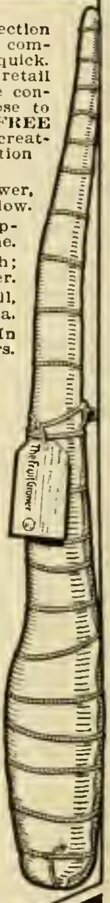

☞ We have made some remarkable offers in connection with our magazine in the past, but never one that compared with this. You will want to snap this one up quick. The collection we are going to give you, if bought at retail from a Nursery would cost you several dollars. We have contracted for a large number of these collections and propose to give the entire seven trees and shrubs away, absolutely **FREE** to new subscribers to The Fruit-Grower, for the purpose of creating a greater interest in horticulture. Here is the collection we offer you **FREE:**

No. 1—One Winter Banana Apple Tree—Fine, vigorous grower, fruit medium to large; smooth; color a bright golden yellow.

No. 2—One Liveland Raspberry Apple Tree—Best summer apple; orange-yellow; striped, splashed with rich red; flesh fine.

No. 3—One Lutie Grape Vine—Succeeds both north and south; vigorous; deep red; heavy bearer; berries large and tender.

No. 4—One Tulip Tree—A magnificent native tree of tall, pyramidal shape; tulip-like flowers; allied to the Magnolia.

No. 5—One Spirea Van Houttei—Finest of all Spireas. In May and June plant is covered with beautiful white flowers.

No. 6—One Hydrangea—Comes into bloom just when there is a scarcity of white flowers; blooms very freely.

No. 7— One Rose, General Jacqueminot—One of the very hardiest and most popular; velvety crimson; very vigorous.

They are exceptionally fine one-year plants—will be carefully bundled and sent **FREE**, all charges prepaid, to anyone who accepts this offer and sends us $1 for 1 year's subscription to The Fruit-Grower, $2 for 3 years, $3 for 5 years, or $5 for 10 years. You will be delighted with the collection, while each issue of The Fruit-Grower will be worth several times the year's subscription price to you if you are the least bit interested in farm, fruit or flowers. The January issue was our Annual Spraying Number; February issue our Annual Gardening Number—either issue worth $1.00 to anyone who plants a tree or a bed of vegetables—we will send sample copies **FREE** as long as they last. The Fruit-Grower is acknowledged to be the world's greatest fruit and farm magazine, beautifully printed and illustrated, monthly, and consists of from 60 to 100 pages each issue.

This free tree offer is open to everyone—it is our greatest offer and effort to create more interest in horticulture and to make new friends for The Fruit-Grower. All we ask in addition to the subscription price is that you send us the names of five friends or neighbors who are also interested in horticulture, so that we may send them **FREE** sample copies of The Fruit-Grower to let them see what a helpful magazine we are publishing. Our magazine alone is worth more than the money you send, and we give the plants mainly to secure your good will and names of fruit-growers.

Read the description of the trees and shrubs and remember that you get all **Seven** of them **Free** with a year's subscription to The Fruit-Grower. Send your order in today, or if you are not acquainted with The Fruit-Grower, we will send sample copy **Free** and beautiful illustrated circular showing trees and flowers in natural colors. In writing use coupon below; put names and addresses of five friends on separate sheet of paper. If you want specimen before ordering, simply sign your name and address and write the word "Sample" on Coupon.

THE FRUIT GROWER,
ST JOSEPH,
MO

COUPON
The Fruit-Grower,
St. Joseph, Mo., Box 501

Enclosed find $.........
for.......year's subscription and FREE collection of Trees and Shrubs as per your offer. List of names is also enclosed.

Name ....
Towo ....State ....

Please mention Am. Bee Journal when writing.

50,000 Copies "Honey as a Health-Food"
To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed free at the bottom of front page on all orders for 100 or more copies.

Address all orders to

GEORGE W. YORK & CO., Chicago, Ill.

North-West Breed!!

HARDY GOLDEN
and
RED CLOVER
ITALIAN QUEENS

I believe Bee-Keepers of the North-West and Pacific States appreciate the fact that **Reliable Queens** can be secured near home. We thank one and all for the liberal patronage given us in the past.

As the Queen-Rearing Business of Sires Bros. Co. is now owned by myself, I want to furnish you as GOOD QUEENS (and better, if possible) this season.

By fair and honorable dealings, and GOOD QUEENS, I hope to secure the patronage of all wishing to secure a Superior Stock of Bees. Order now. Delivered when wanted:

Select Untested, $1 each; 3 for $2.75; 6 for $5.; doz., $9.50.

Tested, $1.50 each; 3 for $4.25; 6 for $8.00; doz., $14.00.

Select Tested, $2 each; 3 for $5.75; 6 for $9.25; doz., $16,00.

Untested Queens ready May 1st.

Tested Queens ready to mail any time.

Price-List Circular of Queens, Nuclei, Bees by the Pound, etc., on Request.

Virgil Sires, NORTH YAKIMA WASHINGTON.

Please mention Am. Bee Journal when writing.

1910 PATENTED JANUARY 4th, 1910

(Serial No. 505,633)

WHY is it that the bee-keepers all over the world are losing ¼ of their bee-families

BECAUSE the rains and the intense heat of the summer warp the bottom of the bee-hives into a form like the bottom of a stiff hat. Through such warping thousands of moths, excluded bees, and other insects continually attack the inner families and destroy them.

WHY do we put stones, or other weights, on the top of our bee-hives?

IN ORDER so the winds don't blow off the same.

WHY don't you seal (lock) water- and air-tight all your old and new bee-hives, top as well as bottom, with my **patent** Safety Sealing Clamp or Locks?

I will sell my Patent Hive Clamps, 90 cents for 4 sets, enough for one bee-hive. The Clamps are made from galvanized tin, and the springs are made of steel wire, and painted well so they will not rust. For a 4-set order I charge 10 cents extra for express; and on 8 or more sets I will pay the express charges to any place in the U. S. A.

When ordering, please give the exact outside dimensions of your hive. For sale only in the United States, by the inventor. Address,

JOHN TOTH,
Bee-Keepers' Supplies
From East to West,
Rt. 5, Mapleton, Ill., U.S.A

Please mention Am. Bee Journal when writing.

Alsike Clover Seed.

Small and large Red, Alfalfa, and Timothy Seed for sale. Seed recleaned and choice. Write for prices.

Catalog of APIARIAN SUPPLIES FREE. Address.

F. A. SNELL,
2A3 MILLEDGEVILLE, Carroll Co., ILL.

Please mention Am. Bee Journal when writing.

For Sale 12 Indian Runner Duck eggs, $1.00. 15 White Wyandotte eggs, $1.00; 15 Rose Comb Rhode Island Reds, $1.50. 2A3t
J. F. MICHAEL, Rt. 1, Winchester, Ind.

MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.
S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
ARIZONA—H. W. Ryder, Phœnix.
MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

Please mention Am. Bee Journal when writing.

Untested Italian Queen-Bees

Our Standard-Bred

6 Queens for $4.00; 3 for $2.10; 1 for 75 cents.

For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

GEORGE W. YORK & Co.:—The two queens received of you some time ago are fine They are good breeders, and the workers are showing up fine I introduced them among black bees, and the bees are nearly yellow now, and are doing good work.
Nemaha Co , Kan , July 15. A. W. SWAN.

GEORGE W. YORK & Co :—After importing queens for 15 years you have sent me the best She keeps 9 1-2 Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week.
Ontario, Canada July 22. CHAS. MITCHELL

GEORGE W. YORK & Co.:—The queen I bought of you has proven a good one, and has given me some of the best colonies.
Washington Co., Va., July 22. N. P. OGLESBY.

GEORGE W YORK & Co.:—The queen I received of you a few days ago came through O. K . and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. MCCOLM.
Marion Co., Ill., July 13.

We usually begin mailing Queens in May, and continue thereafter on the plan of "first come first served." The price of one of our Untested Queens alone is 75 cents, or with the old American Bee Journal for one year—both for $1.40. Three Queens (without Journal) would be $2.10, or 6 for $4.00. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage. You cannot do better than to get one or more of our fine Standard-Bred Queens.

George W. York & Co., 146 W. Superior St. Chicago, Ill.

Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices. June, one, 00c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2A9t

S. F. Trego, Swedona, Ills.

Please mention Am. Bee Journal when writing.

Crown Bone Cutter

Hens fed cut green bone lay more eggs. Get a Crown Bone Cutter. Send to-day for catalogue. Wilson Bros., Box 814, Easton, Pa.

BEST MADE Lowest in Price

Please mention Am. Bee Journal when writing.

Bees, Fruit, Poultry

A GRAND COMBINATION AND A SURE MONEY MAKER—Poultry thrives on orchard insects and bugs; bees get honey from orchard blossoms and fertilize the fruit. No work, small expense and big profits from the honey, eggs and fruit you sell.

Fruit growing pays big! $300 an acre is nothing unusual from Apples, Peaches, Plums, Blackberries, Raspberries, Strawberries, etc.

Let me send you, charges prepaid and free, my grand Combination Catalog on Orchard Trees, Small Fruit and Farm Seeds. I am giving away 20,000 live, hardy fruit plants, and you will get one of them in proper season if you ask for it now. Catalog free. Write to-day.

W. N. SCARFF,
NEW CARLISLE, OHIO.

Please mention Am. Bee Journal when writing.

14¾ Cents a Rod

For 22-in. Hog Fence; 15 3-4c for 26-inch; 18 3-4c for 31-inch; 22c for 34-inch; 25c for a 47-inch Farm Fence. 60-inch Poultry Fence 33c. **Sold on 30 days trial.** 80 rod spool Ideal Barb Wire **$1.55** Catalogue free.

KITSELMAN BROS.,
Box 85 MUNCIE, IND.

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Langstroth on the Honey-Bee

Revised by Dadant. **Latest Edition.**

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. Bound in substantial cloth, and has nearly 600 pages. Revised by that large, practical bee-keeper, so well known to all bee-dom—Mr. C. P. Dadant. Each topic is clearly and thoroughly explained, so that by following the instructions of this book one can not fail to be wonderfully helped on the way to success with bees.

We mail the book for $1.20, or club it with the American Bee Journal for one year—both for $2.00. This is indeed a splendid chance to get a grand bee-book for a very little money.

GEORGE W. YORK & CO.
146 W. Superior St. • CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

BEES, NUCLEI, and QUEENS

For many years I have been selling bees and queens, and guaranteeing satisfaction in every way. I will be in the business more extensively than ever during the season of 1910. I have mailed queen-bees practically all over the world. My prices the coming season will be as follows, for **Italian**

BEES

Full colonies with Tested Queens, in 8-frame Langstroth hive, $7.00 per col,; in same hive with 10 frames, $7.50. Colonies in lots of 5 or more, 25 cents per colony less.

NUCLEI

One 3-Hoffman-Langstroth-frame Nucleus, $2.50; in lots of 6 or more at $2.25 each; price of queens to be added. Orders for nuclei filled about May 10th to 15th, and thereafter.

QUEENS

Tested Italian, each $1.50; 6 for $7.50; or $13.00 per dozen.

I have 50 choice Italian breeding-queens, either golden or leather-colored, at $2.50 each. "First come first served."

Untested Queens After May 15

Italian (warranted) 75 cents each; 6 for $4.00; or $7.50 per dozen. Carniolan or Caucasian at the same prices.

If you have never had any of my Bees or Queens, you should give them a trial. Satisfaction guaranteed. Address all orders to

ARTHUR STANLEY,
DIXON, LEE CO., ILL.

Tennessee-Bred Queens!

**All from Extra-Select Mothers,
Davis' Best, and the
Best Queens Money Can Buy**

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

	November 1st to July 1st			July 1 to Nov. 1				
	1	6	12	1	6	12	Select Breeder -	$4.00
Untested	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Nuclei: no queen 1 fr	2.00
Select Untested	1.25	6.50	12.00	1.00	5.00	9.00	" " " 2 "	3.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00	" " " 3 "	4.00
Select Tested	2.50	13.50	25.00	2.00	10.00	18.00	Colony, " " 8 "	8.00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,

Dealer in, Importer and Breeder of

ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
Ewell Station on L. & N. R. R.

SPRING HILL, TENN.

I Grow Strawberry Plants With as Great Care As You Buy Them

If you buy my plants you get good, strong, healthy ones that are grown in a natural strawberry country where soil, climate and season each help to make hardy and productive plants. You get plants true to name. Whether you plant a dozen or 100,000 your order can be filled promptly from the stock of 1910 plants—I never grew a finer 200-acre lot of them. **Send for 1910 3-color catalog. It is free, and I want you to have a copy of it.**

W. W. THOMAS
The Strawberry Plant Man
152 Main Street, Anna, Ill.

EXTRACTING MADE EASY
by using
MILLER AUTOMATIC DECAPPERS
$5 to $35. Catalog Free.
APICULTURAL MANUFACTURING CO.,
Providence, R. I. 7Atf

A Bargain in Poultry Supplies

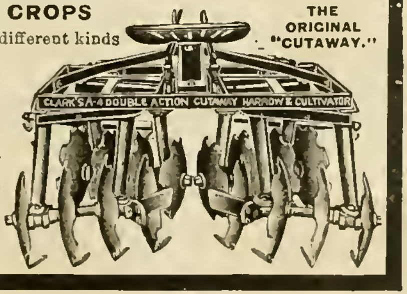
Cornell Incubators and Mann Bone Cutter for sale at about half price.

232-Egg capacity Incubator, only $15.00
364- " " " 18.00
Mann No. 11 Power or Hand Bone Cutter, for only 18.00
Mann Clover Cutter, iron stand. 6.00

Leg Bands, Poultry Markers, and Egg-Testers, at half price.

The above machines are slightly damaged, but about as good as new. Never used, but tested and guaranteed. Address,

Arnd Honey and Bee-Supply Co.,
148 West Superior St., - CHICAGO, ILL.


CLARK'S 4 DOUBLE ACTION CUTAWAY HARROW & CULTIVATOR

CLARK'S

"Cutaway" TRADE MARK

**DOUBLE ACTION HARROW & CULTIVATOR
FOR 100% CROPS**

THE ORIGINAL "CUTAWAY."

With this tool more different kinds of work can be done, with less effort, than with any other. **CLARK'S** is the only Disk Cultivator that completely embodies the double action principle. It will do the work of several disk machines that would cost you several times as much, and do it more thoroughly, because it has 4 gangs instead of only 2. The draft is always from centre—suitable for 2 light horses. Equipped with Extension Head and Jointed Pole, and when so ordered two large disks for Listing are supplied.

Send today for our free Book, "Large Hay Crops."

**CUTAWAY HARROW COMPANY,
Main St., HIGGANUM, CONN.**

Please mention Am. Bee Journal when writing.

ROOT'S GOODS

for 1910 are better than ever. We carry full line of them.

MR. BEEMAN, take notice! For low freight and quick service our location cannot be excelled in the State. Don't delay. Order now. You can be saving your honey crop while the tardy fellow is waiting for his goods to arrive.

Our 1910 Bee-Line

is of the best. We are making a specialty of high-grade untested queens from a famous strain of honey-gatherers, at $1.00 each. Order one now, and be sure to get one for our delivery after May 15, 1910. Remember that cheap queens and poor blood do not pay.

**Rea Bee & Honey Co.,
Reynoldsville, Pa.**

Please mention Am. Bee Journal when writing.

Standard-Bred Queens!

Reared from our Superior Golden and 3-banded Italian stock. The cells are all built in very strong colonies. Our Queens produce bees that store from 150 pounds in Colorado to 256 pounds in N. Y. State, with but little swarming. Queens ready April 1st: Untested, $1.25 each; 6 for $6.00; 12 for $10. Tested, $1.50 each; Select Tested, $2.50; Breeders, $5.00.

Full colonies and Nuclei for sale.

Mr. F. M. Jones, of Lockport, N. Y., writes as follows about our Queens and Bees:

LOCKPORT, N. Y., Sept. 9, 1908.

MR. T. S. HALL, Jasper, Ga.

Dear Sir:—Your letter of the 2d received. I have taken only a part of the honey. The bees are gathering honey very fast. The most of the colonies are yellow as gold and very gentle. I think your Italians are very gentle. I bought 2 dozen from another breeder 1st of July. They are not as gentle as yours. You must remember, I had only 45 colonies of bees last spring—7 strong ones and 38 very weak ones that I would have lost if the cold weather had lasted two weeks longer. Some of them did not have bees enough to cover one frame, and yet their crop will be about 3 tons of white honey. I know you would like to know how I increased to 134 colonies. I had 2 of them swarm out, and I made 14 nuclei from them, and put your young queens with them. I had 5 swarms of black bees come to me and go in the empty hives about the 1st of June. After they had been in the hives 3 weeks I divided them into 20 nuclei and killed the black queens and put in 20 of your nice young Italian queens with them. The rest of the colonies I made by taking frames of hatching brood from the old colonies and putting them in empty hives. I could not have made that increase without the aid of all drawn-out combs ready for the bees. The strongest colonies had 5 stories to the hive, 8 frames each—40 frames all together; 8 frames of brood, 32 frames of honey, 8 lbs. of honey to the frame, 256 lbs. of white honey from the strongest colonies. They have 2500 pounds of honey on their hives now, Sept. 9th. Our Fair was last week. I got $38.50 in premiums on bees and honey; $5 for the best Italian queen.

Yours truly, F. M. JONES.

Discount given on large orders. Price-list ready soon.

T. S. Hall, Jasper, Pickens Co. Ga.

Please mention Am. Bee Journal when writing.

M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

Bee-Supplies

**Lewis Goods in Iowa
at Factory Prices**

Write me for prices on Goods you need for 1910. **Discount for Early Orders.** Send for Catalog. It will be ready about January 1st.

—Beeswax Wanted—

W. J. McCARTY, Emmettsburg, Iowa

— For the Best Goods —

and LOW FREIGHT send your orders for BEE-SUPPLIES to

The A. I. Root Company, Institute Place

CHICAGO, ILLINOIS

We carry on hand constantly a full line of bee-supplies. We have the best shipping facilities, and can fill your orders promptly the year round.

We have carloads coming from the factory constantly to replenish our stock, so that our goods are always bright and new, and we keep our assortments well up.

Send in your order now and take advantage of early order discounts.

Catalog on request. We will be glad to quote you delivered prices on any list you may send in. We have on hand now a large stock of Extracted honey. You will have to order quickly if you want some of this, as our honey always goes fast.

The A. I. Root Co., : : Chicago, Illinois

Institute Place R. W. Boyden, Resident Manager. Jeffrey Building

Take Elevator to Sixth Floor. Telephone 1484 North.

We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

Alfalfa Honey

New Cans and Cases — Fancy Light, 8 cents a pound; Fancy Amber, 7 cents a pound, f. o. b. New York, in not less than 5-case lots. Will shade prices on larger quantitfes. Shall be glad to send samples.

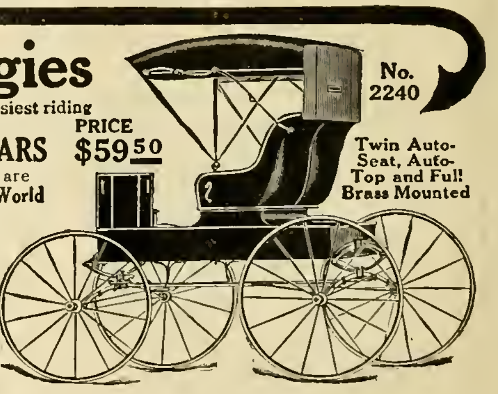
HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

Please mention Am. Bee Journal when writing.

Baby Chicks 8 cts. each. Eggs for hatching, $4 per 100. All kinds poultry at lowest prices. Guarantee safe arrival anywhere. Write for price-list. 10A6t

CULVER POULTRY FARM 1015 Reed, BENSON, NEBR.

Please mention Am. Bee Journal when writing.



Elkhart Buggies

are the best made, best grade and easiest riding buggies on earth for the money.

PRICE $59.50

No. 2240

Twin Auto-Seat, Auto-Top and Full Brass Mounted

FOR THIRTY-SEVEN YEARS

we have been selling direct and are

The Largest Manufacturers in the World

selling to the consumer exclusively.

We ship for examination and approval, guaranteeing safe delivery, and also to save you money. If you are not satisfied as to style, quality and price you are nothing out.

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.
Elkhart, - - - - Indiana

Please mention Am. Bee Journal when writing.

I'll Save You $26.50

on my 1910 Split Hickory Auto-Seat Buggy. Or, 25% saving guaranteed on retail price of any vehicle. Made to order. 30 days' road test—2-year guarantee.

Let Me Pay the Postage on Big Free Book to You

Shows 125 styles. Also harness. Beautiful color-views. Prices astonishingly low. Write me now.

H. C. Phelps, Pres.
The Ohio Carriage Mfg. Co.
Sta. 322, Columbus, O.

Please mention Am. Bee Journal when writing.

! For Sale !

10 to 50 pr. ct. Discount

All Hives and Appurtenances of every description.

Large amount still in the flat. New Hives set up, painted, but never used.

About 125 Hives used and unused.

Would make best terms to party buying all the property.

Call Saturdays P. M., or Sundays; or address,

P. W. DUNNE,
165 South Forest Ave.,
3A3t RIVER FOREST, Cook Co., ILL.

Please mention Am. Bee Journal when writing.

CAPON TOOLS

CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son, Arch St., Philadelphia, Pa.

Please mention Am. Bee Journal when writing.

Again to the Front with
The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to furnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens, each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

Please mention Am. Bee Journal when writing.

New Ruby Nugget Tomato

RUBY NUGGET
TOMATO
This Packet
Seeds Free

A grand novelty which originated on our place and is now offered for the first time. While not large, still it is a handsome fruit, of delicious flavor and wonderfully productive—over 700 fruits have been grown on one plant. A cash prize of $10.00 will be paid to the person growing the largest number of Ruby Nugget Tomatoes on a single plant this year. Price is 35 cents per packet of 100 seeds, but to induce you to give our Choice Iowa Seeds a trial this year, we will send you a trial packet of about 25 seeds without charge, together with a copy of our large illustrated seed and plant catalog. If you have had our catalog this year, please say so. Mention this paper.

IOWA SEED CO., Dept. 5 DES MOINES, IOWA.

Please mention Am. Bee Journal when writing.

BARNES' Foot-Power Machinery

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter. 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

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"If goods are wanted quick, send to Pouder"

ESTABLISHED 1880.

BEE-SUPPLIES

Standard Hives with latest improvements; Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, Veils, and a complete stock of

Root's Standard Goods at Factory Prices

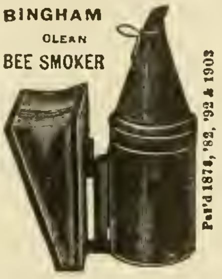
My equipment, my stock of goods, and my shipping facilities, cannot be excelled, and I ship goods to every State in the Union. Illustrated and descriptive catalog mailed free.

Finest White Clover Honey
on hand at all times. **I Buy Beeswax.**

Walter S. Pouder, Indianapolis, Ind. **859 Massachusetts Ave.**

HAND-MADE SMOKERS

BINGHAM
CLEAN
BEE SMOKER



Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

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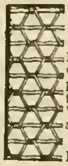

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We have decided to sell them direct to you, and give you the benefit of the lower price we are able to make on account of having no dealers to protect.

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Honey and Beeswax

CHICAGO, Feb. 28.—There is a demand for A No. 1 to fancy white comb, of which there is very little on the market; it brings 17@18c; other grades of comb honey are not in much demand. The feeling in extracted is easier, with the white grades bringing 7@8c, according to quality and amounts taken. The amber grades from 6@7c. Beeswax in good demand at 32c. R. A. BURNETT & CO.

CINCINNATI, Feb. 28.—The market on comb honey is bare. Extracted honey is in good demand—sage, in 60-pound cans, 8½c; amber, in barrels, 6½@6¾c. Beeswax in fair demand at $33 per 100 pounds. These are our selling prices, not what we are paying.
C. H. W. WEBER & CO.

INDIANAPOLIS, Feb. 26.—There is a good demand for best grades of both comb and extracted honey, but jobbing houses are well supplied. Practically no honey is now being offered by producers, and jobbers are selling No. 1 and fancy white comb at 17@18c. Best extracted, 9@10c, according to quantity taken at one shipment. Poor demand for amber honey and no established prices. Producers are being paid 29@31 for good average beeswax. WALTER S. POUDER.

NEW YORK, Feb. 28.—Very little doing in comb honey. There is a fair demand for No. 1 and fancy white at 14@15c. Off grades and dark are rather neglected, and selling in a small way from 10@13c, according to quality. There is not much stock on hand, but some small lots are still coming along. Extracted in fair demand at former quotations as follows: California, water-white, 9c; white-sage, 8@8½c; light amber, 7½@8c; amber, 6½@7c. Southern and West India, in barrels, 65@75c per gallon, according to quality. Beeswax steady at 30c per pound.
HILDRETH & SEGELKEN.

ZANESVILLE, OHIO, Mar. 2.—The demand for honey is perhaps not far from normal. For No. 1 to fancy white comb producers should receive 14@15c, and for best white extracted, 8@8½c, delivered here. Little demand for off grades. In a wholesale way comb brings 2@2½c and extracted 1@2c advance over these prices. For good clean beeswax, producers are offered 28c cash, 31c in trade. EDMUND W. PEIRCE.

KANSAS CITY, MO., Feb. 28.—There is no comb honey in the hands of the jobbers; the demand is good. The supply of extracted is not large, but demand fair. We quote: No. 1 white comb, 24 sections to case, $3.50 per case; No. 2 white and amber, $3.35. White extracted, per pound, 7@7½c. Beeswax, 25@30c. C. C. CLEMONS PRODUCE CO.

BOSTON, Feb. 28.—Fancy white comb honey at 16@17c; No. 1, 15@16c. White, extracted, 8@9c; light amber, 7@8c; amber, 6@7c. Beeswax, 30@32c. BLAKE, LEE CO.

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you alone are to blame. It's yours for the asking, and it will tell you where to get the

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DENVER, COLO.

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Cincinnati, Ohio.

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AMERICAN BEE JOURNAL

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No. 4.

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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY

146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada, $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

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Nemaha Co, Kan, July 15. A. W. SWAN.

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Ontario, Canada July 22 CHAS. MITCHELL

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Washington Co., Va., July 22. N. P. OGLESBY.

GEORGE W YORK & Co.:—The queen I received of you a few days ago came through O. K. and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. McCOLM.
Marion Co., Ill., July 13.

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4A2t Nepperhan Hgts., YONKERS, N. Y.

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AMERICAN
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L.L. LANGSTROTH
CHAS DADANT

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

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GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., APRIL, 1910

Vol. L---No. 4

Editorial Notes and Comments

Dr. Phillips on Foul Brood

Franz Richter, the man who culls from American bee-papers for Bienen-Vater, sent a letter of inquiry concerning foul brood to Dr. E. F. Phillips. In his reply, Dr. Phillips says Italians are little if any less immune to American foul brood than other bees. In the case of European foul brood, Italians are under certain circumstances certainly more resistant to the disease than blacks. American foul brood is more difficult to combat than European. Where the European variety breaks out it is extremely virulent, but after a time its virulence seems to abate. The Alexander treatment, which is not recommended by the U. S. Department, gives satisfactory results only where European foul brood has lost some of its virulence.

Putting One Colony Over Another

The Alexander plan of putting a weak colony over a strong one in spring, for a time, has been a great success by some, and a failure by others. The advice is to handle the hives very gently, so that the bees may not be stirred up to mix together until they have obtained the same hive-scent. Perhaps it may be well in most cases to make sure on this point, by having wire-screen between the two stories for a few days. In that case there is no need of gentle handling, and there is no possibility of harm to either queen until the screen is removed. It is then to be replaced by a queen-excluder. What is perhaps better is to put the excluder on at the start, the wire-cloth over it, and then, after 3 or 4 days, merely remove the wirecloth.

Less troublesome, although not quite so safe, is the plan of putting one or two thicknesses of newspaper over the excluder. The removal of the paper is gradually made by the bees. There is no need to have any entrance from the outside to the upper story. The imprisonment of a weak colony for a few days, with the room of a whole story, can do no harm. Some think it better to put the weak colony under.

Gross or Net Weight of Honey

Just now there is quite a to-do over this matter among Canadian bee-keepers. Some say that when a customer buys a 5-pound can of honey he expects and should get a full-weight 5 pounds of honey. Others say it is the usual thing in buying packages ready put up that the weight of the package is included, and so "a 5-pound can of honey" should mean that can and honey together weigh 5 pounds. Probably it does not matter such a great deal which plan be adopted so long as there is no attempt to deceive the customer; only it is better that there be uniformity, and the final decision of our Canadian brethren, if they ever do all get together, will be watched with interest.

W. Z. Hutchinson's Increase Last Year

In the forepart of June, as he relates in the Review, Editor Hutchinson had, last year, 20 colonies that he says were really 3-frame nuclei, also 500 empty combs, and about July 1 he bought 10 colonies of bees. With this capital to work on, he had in the fall 41 colonies of bees, 70 brood-combs filled with honey, and so far as the report shows, not a drop of salable surplus honey.

A beginner could have increased the 30 colonies to 82, with at least some honey to put on the market, instead of having it all in brood-combs. Not only could a beginner have done so, but the average beginner probably would have done so. And therein Mr. Hutchinson showed himself not a beginner, but a veteran. The beginner who should increase to double the number of colonies that Mr. Hutchinson reached, would go into winter quarters with weaklings, in all probability, and come out in the spring with a less number than would Mr. Hutchinson, those that did come through needing tender nursing.

Mr. Hutchinson says fall found him with 41 colonies in 10-frame hives; combs fairly loaded down with honey and stocked with young bees; and up to March they were wintering perfectly. For every pound of honey in those 70 brood-frames he probably will have returned at least 2 in surplus, if not 5, and the probability is that in the coming season he will not be disappointed in his expectation to make things "hum."

And all this is set down especially for beginners to think over.

Weight of Queen-Bees

As may be found reported in Bienen-Vater, Ph. Reidenbach has for years weighed all his queens, and he finds the weight of a virgin to vary from 150 to 210 milligrams, while the weight of a fertilized queen is from 230 to 300 mg. So when he wants to decide whether a queen is a virgin or not, he weighs her, and finds whether she weigh less thon 210 or more than 230. His chief object in weighing is to select the heaviest queens as being the most prolific to breed from.

Herr Reidenbach is considered good authority, but one may be pardoned for questioning the wisdom of depending chiefly, or indeed very much, upon the weight of a queen in making selection. One of the most prolific queens, if not the most prolific queen, the writer ever had, was one of the smallest and lightest. Neither is it certain that the most prolific queen is always the best. A queen which lays 25 percent more eggs than another is no better than the less prolific queen, if the workers of the latter live 25 percent longer than the workers of the former. Then there are other important qualities to be considered.

Bees Most Immune to Foul Brood

In this country and in Australia it seems to be the general opinion that Italians resist foul brood more successfully than blacks. At least some authorities in England hold the same view. Of those in all these English-speaking countries who do not agree with this view, there are perhaps none who think blacks more immune than Italian; they merely think there is no difference. On the other hand, it seems to be largely the opinion in European countries that immunity belongs to blacks rather than Italians. Is it not possible that both are right?

In Germany, and especially in Switzerland, care has been given to improve the black race, and the Swiss leaders are doing their best to drive out all Italian blood. Just the reverse has been the case in this country. It is just as hard to find pure blacks in America as it is to find pure Italians in Switzerland. What more natural than that the most vigorous bees will be found to be Italians in America, and blacks in Switzerland? And we may yet find that the bees most resistant to disease are not so much those of any one particular race, but those of greatest vigor, whether they be blacks, Italians, hybrids, or what-not.

Two Queens in a Hive

Interest in the matter of having two queens in a hive is not so great as it was. It is now pretty well understood that it is a thing practically impossible to have more than one vigorous queen laying at the same time in the same brood-nest. An old queen and a younger one may live peaceably together—a thing that has been known for a long time.

To have two queens in the same hive, especially in spring, sounds to a beginner like a very attractive thing. His first thought is, "Two queens in a hive! Just the thing. In spring a weak colony is slow at building up. Put in two queens, and have twice as many eggs, and the colony will build up twice as fast." Not so fast, young friend. The number of eggs and the amount of brood in the hive depend not alone upon the queen or queens present, but on the number of workers. No more can be taken care of than can be covered by the workers. A good queen can and will lay all the eggs any ordinary colony can take care of in spring, to say nothing of a weak colony. What would be gained by putting a dozen more queens in the same hive?

There is one real advantage, and perhaps only one, that could be had from two or more queens in the same hive. It would give an easy way to keep reserve queens over winter. But precisely in winter is the most difficult time to have two queens remain together. Even in the case of an old and a young queen, the old queen generally turns up missing in the spring.

Honey-Dew a Secretion or Excretion?

The Scotch authority, D. M. Macdonald, having said that honey-dew is not an excretion but a secretion, Dr. C. Gordon Hewitt, Canadian Dominion Entomologist, and Dr. E. F. Phillips, of Washington, both appear in Gleanings, and say emphatically that Mr. Macdonald is incorrect in saying that honey-dew is largely a plant secretion, and in part a secretion from the nectaries of aphids.

Dr. Hewitt says: "Honey-dew is an excretory product of the digestive tract of the aphid which is naturally expelled by the usual aperture."

Dr. Phillips says: "All observations up to the present time indicate that the honey-dew of aphids is an *excretion* passed through the digestive organs of the body, and is a residue of the juices sucked from the various food-plants for the purpose of food."

Neither the taste nor the appearance of honey-dew will be changed by our knowledge of its source; the only difference it makes is as to our notion of its cleanliness. On this point Dr. Hewitt relieves our minds by saying:

> I entirely fail to understand why the idea of its being an excretion instead of a secretion should be repellant to any one; it is merely changed cell-sap, as also is honey, both of which undergo a change in the digestive tract of the insect. The difference between an excretion and a secretion is really not so great as at first sight appears. The cells of an animal's body produce certain chemical substances according to their nature. The cells of the salivary glands produce by their activity a *secretion* known as the saliva; the wax-cells of the aphid and of the bee produce a wax *secretion*. Many of the cells of the body extract waste substances from such of the body fluids as the blood, etc., and in turn excrete these substances into the digestive tract or the kidneys, or even in the case of sweat-glands on the skin of the animal. Both secretions and excretions may be the result of cell activity. Of course, the term excretion is frequently used to indicate waste products which have never gone through the cells but have passed through the alimentary canal in an unaffected state; that is not, however, cellular excretion.

Bait-Sections in Supers

It is a very generally accepted view that it is a desirable thing to have in the first section-super given to a colony one or more bait-sections, or sections that have been partly filled the previous season and the honey emptied out by the bees. There are some, however, who object that a section which has been kept over winter is not fit to be used again. In any case it will not do to use "any old thing" in the way of a section. A section that has been left on late and is discolored with propolis is not fit to be used. It should be clean and white, so that when filled it can not be distinguished from its neighbor which started with fresh foundation.

Opinions differ as to how baits are to be used. Just what is best depends upon the object in view and the number of baits on hand. One says, "Put a bait in each corner of the super, so that more even work may be done. Without any baits the central sections are finished first, and the corners last. If we can get the bees started on the corners first, we will have more even work, and the central sections will not be darkened while the corners are still unfinished." Another says, "Bees are not very likely to start in a super at more than one point at a time, so even if there is a bait in each corner they may start in only one of them. Of course, it is still true that the corners will all be finished sooner than they would be without baits. But my chief object in using baits is not to get even work so much as to get early work. There is no question that a bait in the center will be begun on sooner than one in a corner, and the difference in time of beginning in the two places might make all the difference between swarming and not swarming."

As already said, the number of baits on hand is a factor. A man with 100 colonies might have 100 baits, or he might have 400 or 500. With 100 baits he cannot put a bait in each corner of each first super, but he can put one in each center. With 400 he can put one in each corner, or he can fill 3 corners and put one in the center. If he wants to take the greatest advantage of his baits to hurry beginning and prevent swarming, he will probably put the 4 baits in the center in a block.

Miscellaneous News-Items

German Bee-Keepers' School

This first school of its kind in Germany is located at Preez, Holstein, with ample grounds, residence for the director, dormitories for scholars, etc., established at a cost of nearly $9000. At a moderate expense a full course is offered in the theory and practice of bee-keeping, with a sufficient apiary for the purpose.

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"A Glimpse of Elysium"

This is a nice 6x9 inch pamphlet of 20 pages and cover, brown-cord tied, being a very neatly printed and gotten up souvenir edition of a paper by Hon. Eugene Secor, of Forest City, Iowa, read before the Iowa State Horticultural Society at its last annual meeting held in Des Moines, Dec. 8, 1909. It also contains a splendid picture of Mr. Secor. It closes with a characteristic poem, entitled, "Let Me Go Hence in June." The whole is written in Mr. Secor's best style, as usual.

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Miter-Box for Cutting Foundation

Rev. G. T. Willis has been using with much satisfaction a miter-box for cutting starters of comb foundation to be used in sections. A bread-knife does the cutting. An item in the construction is worth considering. In making the miter-box, he does not leave a smooth flat surface at the bottom for the knife to cut down upon, but continues the saw-kerf down into the bottom for the depth of 1-16 of an inch. This allows the knife readily to make a cut clear through all the foundation, whereas with a smooth flat surface the cut will not so readily be made clear through to the bottom. The knife is kept wet so it will not stick; it is put in with the handle toward the operator, and close up against the wood, and then with sufficient pressure the knife is drawn toward the operator and a single stroke does the work.

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Yellow Sweet Clover

According to R. L. Snodgrass, in Gleanings, the time to sow sweet clover in Kansas is any time between Dec. 1 and Feb. 1, as the seed germinates best if it freezes a few times in the ground. He values especially the yellow variety, as will be seen by the following:

> There is no other clover that is such a soil-renovater as sweet clover. I have been pasturing my clover ever since one month after I cut the wheat. When I turned my cows on it they doubled the flow of milk, and it is still green as it can be at this writing, Dec. 5, and my cows are still grazing on it—the white clover. I have also a 15-acre field of the yellow variety on rented ground that is about one foot high, and just as green as in mid-summer. I haven't turned the stock on this yet, but expect to do so soon. I prefer the yellow variety to the white, as it is an earlier bloomer and makes more pasture, as it will stand closer grazing. The hay is also much finer, and cures more quickly, and therefore is ready to stack much sooner than the white; and I believe, too, that the stock eat it more readily.
>
> Now, the most important feature of it all is that it is an earlier bloomer by 2 or 3 weeks than the white, or alfalfa either, and consequently it puts the bees in good condition for the alfalfa honey-flow; and if the first crop of alfalfa fails to bloom, as is usual in Kansas, the yellow sweet clover lasts until the second crop of alfalfa is in full bloom.

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"Am Bienenstand"

Under the title "Am Bienenstand," which might be freely translated "In the Apiary," a German bee-book has been received which is written by August Ludwig, and contains 140 clearly printed pages with 109 illustrations. It is published in paper covers for 25 cents, by Fritz Pfenningstorf, Berlin, Germany.

In some things there is a difference between the teachings in this work and the usual teachings in this country, and in many things the teachings are the same. It is reckoned that in moderately favorable years, with suitable pasturage, there will be a harvest of 20 pounds per colony and 50 percent increase. That does not look very good to an American bee-keeper. But when he is told that prices are such that this would mean a yield of $5 per colony, he does not feel like commiserating his German brother.

The size of frame unhesitatingly recommended for all hives is 40x25 centimeters (15.75x9.84 inches) *in the clear*. The frame is hung with the larger dimension horizontal, 9 frames are used, and the hive is called a "lagerbeute" (a flat or lying hive), and if the larger dimension is vertical, 12 frames are used, and the hive is called "Staenderbeute" (upright hive). This latter gives about the same comb surface as 13½ Langstroth frames, and ought to satisfy a Dadant for room.

The advantages of having hives scattered in the open as in this country are considered, "yet over and against these advantages stand many more and much greater disadvantages." Chief of these are the dangers of stings and robbing. An American bee-keeper will feel a bit amused to be told that every hive opened invites robbers, and this may be so bad that by the time the second or third hive is opened the work must stop so as not to endanger the whole apiary, for robbing has already become so bad in many cases that whole apiaries have fallen a sacrifice to it. In spite of this our large bee-keepers find little difficulty in keeping up the work all day long, even when little honey is coming in.

Frames are wired vertically, and there may be a question whether we would not do well to return to the same fashion. But it sounds a little strange to be told to let the foundation come down within an inch or so of the bottom-bar in each brood-frame so as to leave a space for the bees to build drone-comb.

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Before and After the Snow-Storm

I send herewith two photographs of the apiary on my fruit-farm. One shows the hives (which contain 14 frames in the supers) before the last snow-storm, and the other shows the same hives after the snow-storm. The hives have frequently been covered or buried in snow like this, and yet the bees came out in good condition in the spring.

You notice that the covers of the supers are held on with a hook which prevents them from blowing off. Beyond the apiary in the first photograph you can see my barn and apiary where I keep 200 flying homer pigeons.

F. D. Clum, M. D.

Cheviot, N. Y., Feb. 8.

Before the Snow-Storm.

After the Snow-Storm.

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Foul Brood Items

Charles Stewart, one of the New York foul-brood inspectors says, in Gleanings, that in both American and European foul brood, the intensity of the odor varies greatly. He has seen yards where one could smell the disease before reaching the yard, while in others, where the disease had lost some of its virulence, one could get the odor only by putting a comb close to the nose.

In European foul brood most of the affected larvæ die just previous to the proper time for capping. (E. W. Alexander says when they are 2 to 4 days old.)

After disinfecting thousands of hives in years gone by, just as good results are now obtained without disinfecting, merely treating the diseased colonies in their own hives. Mr. Stewart says:

> "Formerly, it was thought necessary to shake again in 3 or 4 days; but we find the average number reinfected is about 1 to 10, so we prefer to watch these colonies treated, and treat the tenth one rather than all of them a second time."

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Foul Brood Law in Switzerland

The following is a translation of the Swiss law on foul brood, lately passed by the government of Switzerland. It shows that the question of foul brood is being solved by other countries, and that some of our States are not staying in the front row. Let us not get too far back; the world is apparently moving ahead.

The translation was made by Mr. C. P. Dadant, from the French, as taken from the Bulletin de la Suisse Romande, of which he is a regular contributor, and reads as follows:

> The Federal Council of Switzerland passed the following law, under date of Dec. 3, 1909:
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> 1. Foul brood among bees (stinking, or otherwise, and pickled brood) is hereby recognized as an infectious, contagious disease, presenting a general danger; it is inserted as No. 12, in the list of epizooties mentioned in Article 24 of the regulations of Oct. 24, 1887, upon policy measures to be enforced against such diseases.
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> 2. The separate Cantons shall designate competent persons inspectors of foul brood, who will order and superintend the treatment and disinfection of diseased colonies, and shall inspect diseased apiaries. The exercise of these functions may be committed by the Cantons to the associations of bee-keepers.
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> 3. Every owner of bees suffering from foul brood shall make immediate declaration of it to the competent authorities. It shall be required to observe in every manner the instructions given him by the inspector or his delegates, lend his aid, as much as in his power, to the work of cleansing and disinfecting his apiary, and employ for this purpose such persons as may be in his service.
>
> 4. It is forbidden to sell, loan or give away colonies, hives or utensils from an infected apiary. The unoccupied hives and the honey receptacles and combs shall be enclosed so as to be out of reach of bees. No colony may

be replaced in any infected hive before the latter has been thoroughly disinfected.

5. In any infected apiary the struggle consists essentially in the destruction of the germs of the disease. In view of this, the bees which took the infected hives shall either be killed by brimstone vapors or united in artificial swarms in swarming boxes, where they shall be set apart for 3 days, after which they may be put upon comb foundation.

The combs containing brood, or the remnants of dead larvæ, shall be destroyed by fire. All the other combs of diseased hives shall be melted up.

Such straw hives as have contained diseased colonies shall be destroyed by fire. Wooden hives or utensils that have been in contact with diseased colonies shall be washed with a 10 percent solution of soda in hot water; they shall then be submitted to the flame of a benzine lamp, or boiled for an hour in a 10 percent soda solution.

If the diseased colonies are located in a house-apiary, all parts of the building that may have been in contact with the disease—floors, tables, supports, etc.—shall also be washed in a soda solution, or painted with linseed oil paint. The soil in front of the apiary shall be spaded, or in case of impossibility, it shall be disinfected.

6. The foul brood inspectors shall be permitted to examine all the apiaries situated in an infected district, in order to detect the presence of the malady.

7. Violations of the above law shall be punishable by a fine of from $2 to $100, according to the police regulations concerning epizooties. The regulations of the penal code shall be applicable to those who propagate the disease by malevolence.

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Our Front-Page Pictures

The following paragraphs tell something about pictures of apiaries shown on the front page this month:

No. 1.—Apiary of J. J. Hangartner

Enclosed find a picture of a portion of my bee-yard, and myself standing in the front. I have 120 colonies, but last season was the poorest in the past 28 years. I received only about 800 pounds of comb honey. But all the colonies are in good condition. I winter my bees out-of-doors, and have lost very few as a result of outdoor wintering. I have all large chaff hives, making them myself as increase demanded, which you will notice in the picture.
J. J. HANGARTNER.
Marion, Wis.

No. 2.—Apiary of A. Rozell

I am sending a small picture of our apiary in Los Angeles County. Now, Mr. Grigsby may find just a little fault with me for doing so, but Mr. Grigsby and I do not think alike on the picture question. I think you are doing about the right thing, and treating those who have small and large apiaries fairly.

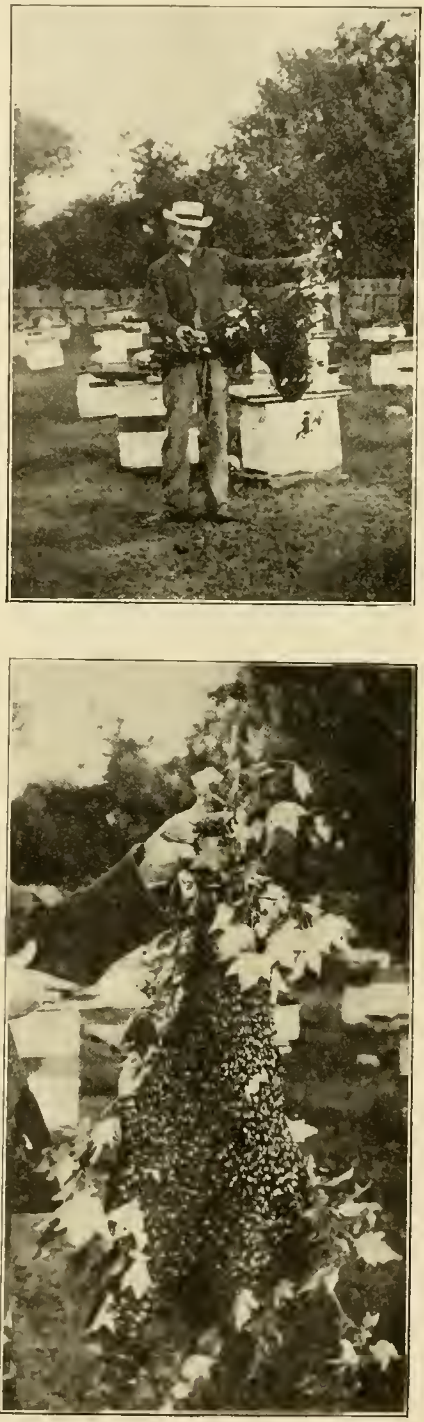
The picture represents a rather large apiary, the whole of which is not shown, at least a third not being in view, to the left hand. It may please many bee-keepers to look at this picture, and I would like very much to see Mr. Grigsby's by the side of it, thus to see how it would "stack up" by the side of his. It would hardly do for many to have the Bee Journal devoted entirely to solid reading—we want some variety in its make-up—pictures, advertising, humor, and the work in the apiary. I think, Mr. York, you're "on the job" pretty well.
Los Angeles, Cal., Nov. 20. A. ROZELL.

No. 3.—Apiary of Edwin Corwin

I am sending 3 picture postal cards, two of myself holding a 12-pound swarm of bees, and one of Dr. C. L. Walton, of Chicago, hiving said swarm in my yard. In August there was a great deal of buckwheat sown in my locality, and when the bees commenced capping the 3 and 4 supers of honey they would swarm. I wintered 125 colonies. The season wasn't good until buckwheat time, and then it was fine—bees stored honey fast. I secured 2000 pounds of extracted and 3000 pounds of comb honey, besides fighting black brood all summer. The bees, in this locality, have had black brood for 5 or 6 years. It has killed some whole apiaries—James Heddon's, at Dowagiac, and lots of others. I am located 6 miles from James Heddon. EDWIN CORWIN.
Dowagiac, Mich., Dec. 14, 1909.

No. 4.—Apiary of Chas. Wallin

I will send you a picture of my bee-yard which contains 19 colonies. The two "fellows" you see in the picture are my brother and myself. My dog, Carlo, is close to my right. The building you see is the living house. I had good returns from my bees the last two years. I have learned a good deal by reading the American Bee Journal.
St. James, Minn. CHAS. WALLIN.



EDWIN CORWIN'S APIARY AND SWARMS.

No. 5.—Apiary of Jay Smith

This picture shows the apiary of Jay Smith, of Vincennes, Ind. He wrote some time ago that the bees were wintering well on honey-dew.

No. 6.—Apiary of James B. Trease

I will send a picture of my apiary of 70 colonies. Only a part of them can be seen—they are in an orchard. The supers have been taken off. JAMES B. TREASE.
Shelton, Wash.

No. 7.—Apiary of O. B. Griffin

I send a postal card of my bee-yard with part of the surplus honey crop still on the hives. O. B. GRIFFIN.
Caribou, Maine, March 7.

No. 8.—Apiary of H. H. Fay

This is a picture of the bee-yard of H. H. Fay, of Epworth, Iowa. Mr. F. failed to send any descriptive matter to appear with the picture.

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Sweet Clover as a Soil Restorer

We have received the following from Wm. M. Whitney, of Batavia, Ill., dated Feb. 16, 1910:

EDITOR AMERICAN BEE JOURNAL:—I herewith enclose a clipping from an article entitled, "Darby's Talk to Farmers," in the Eeb. 10th number of the Cincinnati Enquirer. Of course, all bee-keepers are supposed to know the value of sweet clover as a honey-plant, but I am inclined to think there are many "farm bee-keepers"—as some are called—who yet regard it a noxious weed, and treat it as such. Knowing little or nothing of its fertilizing value, they greatly underestimate it as a farm product. Experiment Stations throughout the country are beginning to catalog it among the most valuable plants. Strange, isn't it, that it should take so many years to gain recognition? But so it is, and ever has been, with almost everything valbable in life.
WM. M. WHITNEY.

The clipping enclosed by Mr. Whitney reads as follows:

Sweet clover is fast coming to the front as a soil restorer. Until the last few years it has been classed as a troublesome weed by many. I have been experimenting with the different clovers for several years as to their value as cured hay, grazing, and as a crop to turn under as green manure. As cured hay sweet clover comes second to alfalfa, which is the finest feed we grow in the Ohio Valley. As a pasture, sweet clover is away ahead. On land that is very thin, and on which there is little humus, if sown to sweet clover and blue-grass there will be a good stand of pasture the second season, and if pastured lightly a heavy sod is formed rapidly. Then after the fourth season it may be pastured regularly, and it will continue to improve as a green crop to turn under. I have not been able to find anything near its equal. Where sown thickly it makes a very heavy growth to turn under, and as this decays and is converted into humus, the nitrogen-gathering bacteria that live on the roots of the clover, release the nitrogen that was gathered while the crop was growing.

The bitter taste that sweet clover has is some against it, as all stock do not take to it readily, but this bitterness, caused by a property contained by sweet clover known as cumarin, prevents the stock that feed on the clover from becoming bloated. Hence, anything that makes a good food is a good fertilizer.

Of course, all who have read the bee-papers during the past 10 or 15 years, know what a fine honey-plant sweet clover is. In some parts of the country it is made into most excellent hay. As noted in the above clipping, it surely is a splendid soil fertilizer and renovator. Score a whole lot for the once despised sweet clover!

Fifty Years a Reader.

I am sorry to say that my connection with the American Bee Journal must cease with the end of my present subscription. I have read it for 50 years with pleasure and profit; but a malignant cancer will end my life in a few days. With great sorrow I bid you an everlasting farewell! J. S. HUGHES.
Chipley, Fla.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Your Sweets, But Not You

We are indebted to the courtesy of Mr. Eugene Libby for the following brightly written lines, clipped from the Portland, Maine, Telegram. The caption is perhaps the best comment upon the sad refrain, "They want your sweets, but they want not you;" but let us thankfully remember that that sad refrain is not of universal application:

" 'Tis True, 'Tis Pity, Pity 'Tis 'Tis True."

Roses sweet in your dainty dresses,
  Royal pansies in velvet gowns,
Fair young wheat that the wind caresses,
  Brown-eyed daisies with golden crowns;
And oh, my drooping and rich ripe clover,
  Your hearts are heavy, but not with dew!
Your ardent bee is a faithless rover,
  He wants your sweets, but he wants not you!
All ye wilding and winsome beauties,
  Rich in spoils for that bandit crew,
Bee and butterfly, whose pursuit is
  Foraging sweets, if you only knew
Why they waver, and flit, and hover,
  The same forever and aye is true!
The reason is one, the wide world over,
  They want your sweets, but they want not you!

—Clara Marcelle Greene.

Cocoons and Wax-Moths in Hives

Early last spring I discovered cocoons of wax-moth in the corners of a dovetailed hive. I set a new hive close to the old one, lifted the old hive and carefully set it on the ground, brushed off the bottom-board of the hive of dead bees and cocoons, set a new hive-body on the bottom, then took the frames of the old hive and put them into the new one, put on a cover, set the old hive close in front of the new one, and shoved the bees into their clean home. They did not seem to mind, and went to work at once.

Ohio Bee-Woman.

It was well enough to get the old hive emptied so that the cocoons might be cleaned out, but their presence was an index that there had been something still worse—worms in the combs. A colony ought never to be suffered so poor and weak as to allow the worms tranquilly to plaster cocoons in the corners of the hive.

A Successful Wisconsin Bee-Woman

Attendants upon the bee-conventions at Chicago will not have failled to see one sister almost always there, sitting quietly with little or nothing to say, but intent upon all going on. When told, "That is Miss Mathilde Candler, who keeps 300 colonies of bees," one is sure to take a second look at her, and if one engages her in conversation one finds that what she says is well worth hearing. The following story of her beginning and growth as a bee-keeper, which is taken from the Bee-Keepers' Review, cannot fail to be of interest:

"How did you ever come to take up bee-keeping as a business?" is a question I am often asked. It seems to surprise some people to find a woman who is a bee-keeper, although I do not know why. Woman is taking a more or less active part in all the world's work, and I cannot see why she may not become interested in bees, or anything else, for that matter, in which human beings may be interested. It somewhat surprises me that it *surprises* them.

Before I had bees I was a school-marm, teaching a country district school. One day I saw an advertisement in an agricultural paper of the "A B C of Bee Culture." Having always had a liking for the objects of Nature—birds and bees and bugs and beetles and flowers and trees, of which I used to gather specimens to examine with a microscope—I became interested, and resolved to send for the book. Reading it brought on the worst kind of a bee-fever, not only the *wonders* of bee-keeping of which I read there, but also the greater *independence* which I thought I could secure attracted me, and in the spring of 1890 I bought 2 colonies of bees in box-hives.

Now began my troubles. O those first lessons in bee-keeping! Stings! I wonder if any other beginner was stung any worse, or any more, than I was that first season. I waded right into it, and I was a sight. I actually *cried* with the pain. I even wished that I had never seen those horrid bees, and that something might happen to rid me of them forever; although I never would have confessed myself defeated to any one.

But nothing happened, and after a time I learned better how to handle them. I bought some rubber gloves, made a good bee-veil, and learned to keep the smoker from going out. My enthusiasm returned. I subscribed for a bee-paper, and read eagerly the articles from the pens of old and experienced bee-keepers. Do all beginners read those first? Does not every enthusiastic beginner (and what one is not enthusiastic) expect to become one of these experts some time, and does he care very much for reading beginners' reports?

I also bought several other bee-books, and later subscribed for all the bee-papers. I would have been the loser had I not done so, for I think I have learned something from each one more than enough to pay the subscription price during my whole bee-keeping life. One bee-paper alone by no means contains nearly all there is to tell of bee-keeping experience and information. A beginner should read them *all*—and I am yet a beginner.

I made a visit to a neighboring bee-keeper where I saw my first patent hive, and secured a sample, after which all my earlier hives were made. I also visited Mr. France, at Platteville, and saw how they handled their bees there. It was a revelation to me, and a most valuable lesson. Actual demonstration is way ahead of any written description or instruction in a bee-book. A beginner can do nothing more profitable than to visit some near-by brother in bee-keeping.

I worked with bees in the summer, and attended an Art Institute in Chicago in winter, having given up teaching as soon as I had bees enough to give a little revenue. I kept only between 60 and 70 colonies, and thought that was about all my locality could profitably maintain. Now I have about three times that number in the same locality, and it is only an average one; but the management is different.

Financial losses and difficulties finally compelled me to give up my art studies. About this time there appeared the editorial in the Bee-Keepers' Review urging the keeping of "more bees." I resolved to do so, in the hope of recovering what I had lost, and increased to about 100 colonies. The following spring I commenced an out-apiary about 8 miles from home. I started it with only 18 colonies. That was a mistake. I should have taken half the colonies in the yard. I had no money with which to buy hives and fixtures, but I had a lot of discarded hive-bodies, and I resolved to use these in my out-yard. That was another mistake. I should have used them in the home-yard where I could better watch them and give the attention that old and worn-out hives sometimes demand.

I had an opportunity to buy some cheap lumber on credit, and had some nice bee-sheds put up, three in number, 6x16 feet. Having neither covers nor bottom-boards, I put the bees in these sheds or house-apiaries, and increased until they were full, and the rest I put outside.

It is uphill work building up an apiary without covers or bottom-boards. I used dirt bottom-boards, sawdust bottom-boards and wood; and, for covers, many hives were just covered with paper and any boards I could find to use, weighted down with stones so the wind could not blow them off. Colonies do not become very strong under those conditions. And in the fall I had a lot of weak colonies to unite; and in the spring a lot of dead or very weak ones, caused by mice getting into the hives. But every year I made some advance, until now my colonies are in pretty fair shape, and I have increased both yards until I have about 300 colonies.

I used to do nearly all the work alone, and did much for which I was neither fitted nor strong enough. Then I got a neighbor boy to help me during part of the school vacation. Now I employ help whenever I need it, provided I can get it. Help is always hard to get; especially help in a bee-yard, and I often have to do everything alone, and work from daylight until dark. Lifting is the hardest part of bee-work for a woman, and I think I've done my share of it.

I keep no horse, but go to the out-apiary by train, as it is near the railroad station. Board is cheap, and I remain until the work is finished, doing only what seems most necessary at the time. Of course, with so many bees, and insufficient or no help, I cannot hope to have things as they ought to be, or as I would like to have them. I just do as well as I can, and let it go at that.

Mathilde Candler.

Cassville, Wis.

Honey as Toll for Stings

From 10 colonies, in 1909, I took 260 pounds of salable honey. I did not weigh the unfinished sections, taking them as toll for numerous stings.

Ohio Bee-Woman.

Sketches of Beedomites

A. J. KING

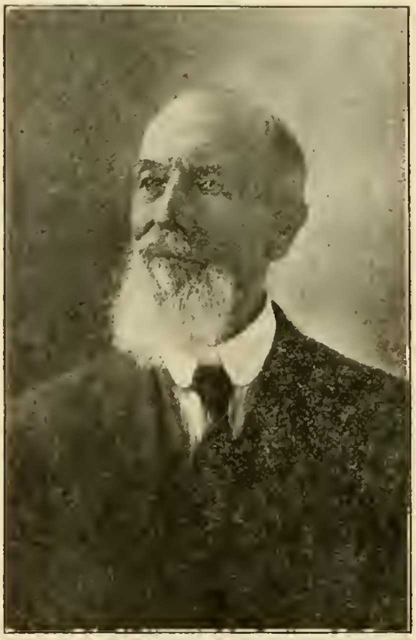
It seems that after I had prepared a short sketch of the life of Prof. King for Gleanings in Bee Culture, the editor of the American Bee Journal wrote the Professor for a sketch of his life, not knowing that I had about that time submitted my "copy" on the same subject to Gleanings. Now it happens that Prof. King asks me to send the "Old Reliable" the "little biographical sketch" Mr. York wrote for, so it is in this way that I come to write up the veteran bee-keeper a second time within a few months. In doing this I now give a more complete resume of his work.

Albert J. King learned to handle bees when he was quite young, for bees were kept on the family homestead in northern Ohio long before the advent of movable-comb hives. The bee-keeper of the family was his brother, Nelson H. King, who was quite a genius, and it was he, I believe, who invented the American bee-hive. The invention of this hive made the two brothers mentioned, and a third, Homer A. King, famous in the bee-world of a generation and more ago. The subject of this sketch had little to do with the developing of the first bee-hive factory ever started—it was H. A. and Nelson King who industriously pushed the American bee-hive to the front in the 60's; their factory at Nevada, Ohio, was kept running night and day to supply the demand. About this time Albert went to California to introduce the King hive into that State. There he found the Harbison hive in full swing, and it remained so until the early 70's. In the Golden State the latter brother fell into the ways of a pedagogue, and for some years was engaged in tutoring the savage young Californians in the walks of every-day life, especially in "teaching their young ideas how to shoot." It was in this way that I fell under the sway of the bee-keeper school-master.

It was around the middle 60's that a school-house was built in our district, and a gentleman from Ohio, who had recently moved to the district, was instrumental in inducing Mr. King to come to the district, with a promise of installing him master of the new school. The latter came, built himself a home, and—only to find that his would-be friends went back upon him, and were going to elect some one else teacher! Just then an election of school trustees took place which upset the plans of the tricksters, if they might be called such. On the new board was the writer's father, Mr. A. D. Pryal, recently deceased, and he and another new member, Mr. John Kearney, I believe, saw that Mr. King was treated as he should have been—so he taught the school until he resigned some years later. It was in this way as a youngster that I became acquainted with this gentleman, who, a few years later, played quite an important part in the early history of bee-keeping in the United States.

After leaving California, Mr. King went East, and was soon associated with his brother, Homer A. King, in the publication of the National Agriculturist and Bee Journal. Later this paper was merged into the Bee-Keepers' Magazine. The first issue of the latter was published in the fall of 1872, and so, if it were still in existence, it would rank as the second oldest bee-paper in America. A few years later the senior brother withdrew from the publishing business, and the subject of this sketch continued the editorial management of the paper quite successfully until about 1885, when he sold his entire interests in the paper and supply business to others. Some of the best articles on bee-keeping that ever appeared in any bee-publication were published in the Bee-Keepers' Magazine, the editor being fortunate in securing the services of the leading solid weights in apicultural work of the times.

It was during Prof. King's editorial management of the Magazine that the great fight over the invention of the manufacture of comb foundation began. Mr. King found that the pretensions of the would-be patentee were groundless, and he went to work and in a masterly way made a clean expose of the whole affair leading up to the invention of comb-foundation manufacturing, including the making of the embossed rolls, which are now used in the making of this most useful adjunct of the apiary. How soon we forget the past; 33 or 35 years ago the gentleman I write of was putting in his best efforts to give to the bee-keeping world the free use of comb foundation, and he did so. How few of today recall the time, or give him that meed of thanks he is so much entitled to. And it was he who also did much to popularize the bee-smoker. The times were ripe for this invention. In connection with the late Moses Quinby and T. F. Bingham (each separately), he perfected the smoker so that the ones in use at this time are much the same as the later products of A. J. King. And in the matter of improving bee-hives this bee-keeper was ever alert. He turned out several splendid hives that would have become standards among bee-keepers if it were not for the fact that American bee-keepers demand the lowest possible cost along with utility in all the appliances used in the apiary. This is owing, mostly, to the fact that the product of the apiary has to be sold at a price that does not warrant the producer spending much capital for equipment, etc. In England and on the continent of the Old World this is not so; there, costly hives are the rule. 'Tis true, perhaps, that a cheap hive will often allow a colony of bees to produce as much honey as the more expensive one, so, on the whole, the American bee-keeper is justified in being economical.


Albert J. King.

While in the great city of New York, Prof. King demonstrated that bees could be profitably and successfully kept on the roofs of buildings. There he maintained several apiaries; often reporters from the city press would visit some of these roof-apiaries and forthwith would appear "How doeth the busy bee" in Gotham. All of which attracted attention to the industry and helped to whet the appetite for honey. And in even more did he show his skill as an educator in the noble art of tending bees. While conducting his bee-publication and supply business, he instituted a bee-college, as it were, and had classes in apiculture at his office in New York. The students came from the city and adjacent country. Often after instruction in the "class"-room an adjournment would be made to the roof-apiary above, where the practical side of apiculture would be demonstrated.

In 1873 Prof. King brought out a revised edition of his brothers' "Bee-Keepers' Text-Book," which up to that time had had the largest circulation of any bee-book ever published. He also prepared articles for several permanent works, notably for the Ninth or American edition of the great Encyclopedia Britannica. This article stands as a lasting monument to Prof. King's contribution to the bee-literature of this country.

Here I might mention that Prof. King's Practical College of Apiculture attracted a good deal of attention at the time; it was so novel to find such a school that many persons other than the news-gatherers came to see it. The "College apiary" occupied a space on the roof 25x75 feet, and I think I am free to state that many of our agricultural colleges at this time cannot boast of a larger or better equipment. This school—or college—apiary was illustrated and described in Harper's Magazine at that time. It was from the reading of an article that Prof. King contributed to the Scientific American that induced Cuban capitalists to secure his services in establishing a large apiary in Cuba. He had previously established several apiaries on the same island for other parties. About this time he was elected president of the Eastern Bee-Keepers' Association, but his absence in Cuba prevented him doing active work for the association.

Prof. King was a frequent exhibitor of apiarian appliances and literature, as well as Italian bees and queens, at the American Institute in New York city, and on several occasions he was awarded the highest premium ever given an American bee-keeper. Several of the gold and silver medals bestowed on him he highly prizes at even this late date.

To illustrate still further the campaign of enlightment in the modern field of bee-keeping he brought about, Prof. King was secured by Cooper's Institute to lecture on several occasions before the Farmers' Club, on "Modern Bee-Keeping."

Reverting to the invention of comb foundation, I might here remark that during Prof. King's hunt for evidence to overthrow the pretensions of the

We have about 30 copies left of the book, "Langstroth on the Honey-Bee," of the edition just preceding the last. It is practically equal to the latest edition, and we will mail them so long as they last, for 90 cents a copy. (The regular price is $1.20.) Or, we will send one of the above 90-cent copies with the American Bee Journal one year—both for $1.75. Address the American Bee Journal office.

Wagner claims as patentee of the comb foundation process, the former secured samples of comb foundation made as early as 1853, and which were exhibited in that year at the World's Fair then held in London, England. This invention, like many of the other very useful ones that modern bee-keeping is indebted to, had its birth in Germany, but, as in the case of the bee-smoker, honey-extractor, movable frames, etc., it remained for American ingenuity to bring them to the highest stage of perfection. It took a Langstroth and a King to give us a perfect hive and frame; a Quinby and a Bingham to give us a direct-draft bee-smoker that is the principle of all smokers now in use; a Weed, Washburn, and others to perfect the comb-foundation machine; a Root, Lewis, Peabody, and a few others to give us the extractor of today, though it must not be denied that in the case of the extractor we have to take off our hats to the work of a distinguished foreign genius who devised the automatic reversible honey-extractor—I refer to Mr. Thos. Wm. Cowan, of England, whose form of extractor will endure for all time, as the most useful invention ever given the bee-and-honey fraternity.

One of the most prized of all the premiums given Prof. King for his contributions to the bee-world, is the finely wrought solid gold Apis melifica bestowed upon him by a committee of the Paris World's Fair as a reward for his exhibit of the first volume of the Bee-Keepers' Magazine, which was edited by Homer A. King and himself.

Much more might be written of Prof. King, but the foregoing will suffice, except to state that up to a year ago he had taken an active part in tending bees. Failing health has compelled him to relinquish this cherished work. Today he is leading a quiet life at the home of his son-in-law in San Diego, this State. Both Prof. King and his good wife, whom I well remember for her kindly and queenly ways when I was a little boy, have each passed the 74th milestone in life's pilgrimage; while he has worked among much sweetness, still the cup of bitterness has been their lot on several occasions—of their 4 children, I believe, only one remains alive, Mr. Benjamin King, of Los Angeles. Their only remaining daughter died suddenly in San Diego a little less than 2 years ago, as announced in these pages shortly afterward. But it is the wish of the bee-keepers of this land, I am sure, that the remaining days of their lives may be as bright and peaceful as is the climate in which they dwell. W. A. PRYAL.

Oakland, Cal.

Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ontario, Canada.

Control of Swarming

We are in receipt of a circular letter from the Ontario Agricultural and Experimental Union, announcing that, for 1910, apiculture has been added to the list of departments for experimental work. As there is no material as yet the first year to be sent out, the letter states that for this season the experiments asked for will be on the control of swarming, and the receivers of the circular are requested to write Mr. Morley Pettit, at Guelph, stating their willingness to help in the work in a careful and systematic manner. All so expressing themselves as willing to conduct an experiment, will be furnished with all instructions and specifications by Mr. Pettit.

I suppose that all Ontario bee-keepers of which the department has the addresses, will be receiving a copy of this circular, and as the list runs away up in the thousands, Mr. Pettit's appeal through the Experimental Union should meet with a response on the part of many. The fact of the Union at last recognizing bee-keeping as being on the same status as the various other agricultural industries that have been receiving attention so long, is a matter of congratulation on the part of the apiarists of Ontario, and with so capable a man as Mr. Pettit in charge of the bee-keeping branch, the calling should soon appeal in a different and more important light, than has been the case in the past.

Some time ago I mentioned in these columns how undecided the question was in regard to the manner of work to be done at the College by Mr. Pettit, when the latter ventured to ask the Ontario association when in convention assembled at Toronto, in November last. It appears to the writer that the work outlined in the circular referred to is a step in the right direction, and we may have reason to believe that this is just a beginning, and surely will be pardoned for being so egotistical as to have visions of the apiary department at Guelph, Ont., soon being in position second to none on the continent.

Any Ontario bee-keepers who may not receive one of the circulars, and who may chance to see this item, will no doubt confer a favor on Mr. Pettit by writing him of their willingness to help in the work he may outline for them.

Cause of Spring Dwindling

D. Everett Lyon, who conducts the apiary department of the snug little paper called the Farm Journal, says in the March issue that spring dwindling "results from the colony becoming chilled during a cold spell that may follow their removal from the cellar." Mr. Lyon does not say what causes dwindling in colonies that have been wintered on the summer stands, but I suppose it is but logical to suppose that he would assign the same reason as in the former instance.

With all due regard for Mr. Lyon's opinion on the matter, I, for one, do not believe that there is as much in the idea of spring dwindling being caused by adverse weather conditions in the spring; and rather feel more convinced each year that the trouble is simply an after effect of bad wintering. To be sure, I would not wish to be understood as advocating the idea that adverse weather conditions are not harmful to bees in the spring, but I mean to say that such a condition is merely a secondary factor at the most, in so far as it is responsible for causing spring dwindling. Let me illustrate:

Who has not noticed that whether bees are wintered in the cellar or outdoors, if the tell-tale marks of dysentery are around the entrances of the hives, that colonies so *marked* will dwindle away like snow in an April sun, while other colonies that are clean and nice will not be materially affected even if we have weeks of unfavorable weather in the spring? Take a colony with a bad dose of dysentery, and you may wrap up the hive with any kind of protection imaginable or practicable, and it will go "all to pieces" beside its sister colony which, healthy, but unprotected, continues to hold its own and even increase, although the weather conditions are the same in both cases. Other causes may also contribute towards spring dwindling, and at least one of these causes may be farther to trace up than the winter the bees may have passed through without actually dying.

Last fall 5 colonies were placed in the home cellar under the steps, all the rest at this yard being wintered outdoors. Four of these colonies have young queens, while in the case of the other it was only discovered by accident late in September that the queen was useless, and had been for some time, as at that date there were only a few scattering cells of normal brood, with patches of drone-brood here and there. At that late date the old queen was destroyed and a young queen on hand was introduced by shaking all the bees in front of the hive and then throwing the queen among them. I did not know for sure whether the queen was accepted or not, but carried the hive into the cellar with the others, with the idea of seeing how all those old bees would fare in the winter and spring.

Right here I wish to qualify what I mean by "old" bees, as much depends upon the conditions surrounding such bees, in so far as it affects their longevity. For a few years prior to the growing of buckwheat in our section, practically all honey-gathering was over with the clover flow, and as a result very little brood was reared at the latter part of the season. But the old bees in the hives were never very active during all this period of dearth, and consequently their vitality was not impaired to any great extent; and as for results in wintering, they invariably came through in good condition. Now with a fall flow this is all changed, as the bees work hard and are prematurely aged, as is the case in the clover or any other honey-flow. The old bees in the hive mentioned stored quite a large surplus from the buckwheat, while all the while no young ones were being reared to supplement the waste. However, the 5 colonies were carried out of the cellar on March 5th, about a month earlier than is the general rule. To all appearances the 5 colonies were in perfect condition, but it was noticed that the colony that had the old queen last fall had a few spots on the entrance. A hasty peep revealed the fact that the young queen had been accepted all right, as there was sealed brood in the hive. As near as could be determined by the hurried look at the other 4, no brood was started, at least none was sealed, anyway. Now the first colony referred to is full of bees, but I expected that it would spring dwindle, and from present indications it looks as though I am not to be disappointed (?). All 5 colonies have a telescoping extension top, and are packed nicely on top of the frame; as to side packing in the shape of paper, etc., I would not pay 2 cents to have somebody cover all my hives that way in any spring, no matter how cold it might be.

Well, we have had some cold weather since the 13th up to this date (March 17th), but as to those 4 colonies—well, I may be a bit too sure, but I would not give a nickel to insure them against spring dwindling, even if the weather stays cold for two weeks longer. As to the other, it is a different story, and every time I pass by the entrance of the hive I clean out dead bees all bloated up that are obstructing the contracted entrance; and while at the job invariably some old worn-out ones will come out buzzing, seemingly anxious to rid the hive of their useless presence. Of course, that colony will spring dwindle, and the same cause that is responsible for the trouble in this case, is also responsible for thousands of others in the country every year. Bad stores, damp hives, and a multitude of other causes contribute to the death-rate every year, and so often the cause is wrongfully diagnosed as "spring dwindling."

Let me repeat that in 99 cases out of 100, if the bees have wintered perfectly, there will be no spring dwindling to amount to anything.

"There is No Place Like —"

The old saying, "there is no place like home," seems to be as true as ever in the majority of cases, even when the maxim is applied to bee-keepers who leave their homes in search of richer pastures. I am reminded of this in a letter received from Mr. Arthur Laing, some weeks ago, in which he mentions his intention of coming back to Ontario again this spring. Mr. Laing has for years been afflicted with the "wanderlust," and has in his travels visited Cuba and many States of the Union. His latest move was to sunny California, and from sundry longings I, myself, have for that warmer clime, I rather imagined that Mr. Laing would be enamored with the country, and not care to come back to "Our Lady of the Snows." However, it seems otherwise, as Mr. Laing says in his letter, "I am living in a land where for 6 months we have had sunshine and sand, and now for about 6 weeks we have had rain. California is a nice country, but Ontario is nicer, and I am coming back."

Another extensive bee-keeper of eastern Ontario sold all his bees a year ago and went to the same country, and last fall he wrote to the one who bought his bees, that he was coming back again, as he preferred snow-banks in the winter to sand-storms. Since then he has come back and purchased his bees again at one-half more than he sold them for over a year ago. Say, judging by these testimonies they must have some drawbacks in California as well as here in Ontario; but lest this should stir up some Californian to attack this scribe, let me remind all with such intentions, that all I am saying is what the "other fellow" says, and, personally, I plead guilty still to having a longing to see the country under discussion.

Bees Wintering "First-Classly"

Before closing for this month, let me say that from present indications the bees are coming through the winter in first-class condition. Of course, it is too early to be positive in the matter, but at this date (March 18th) I have reason to believe that there is not a dead colony in my yards, and from reports of a number received by 'phone, the condition seems to be general in York County.

Clover is now being tried pretty hard, as we are having heavy freezing at nights with thawing in the daytime. However, we always have a siege of this weather in the spring, and in the great majority of cases the clover stands it all right, so we will not borrow trouble, and at present continue to be pleased at the splendid shape in which the bees appear to be.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

Bulk-Comb Honey Production—Our Ideal Frame

Numerous questions from prospective bulk-comb honey producers have been asked about the frame we are using, asking a more definite description of it, despite the fact that this frame has been described several times. With an attempt to make this more clearly understood, a rough drawing was made which shows a top-bar, end-bar and a bottom-bar, and it is hoped that the description following will save further enquiring letters, as I will not be able to answer them on account of the very busy season now on.

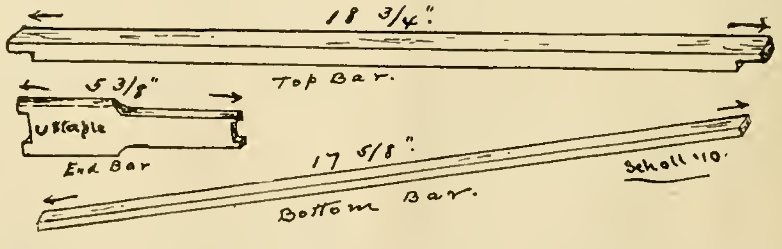
First, we will take the top-bar, which is really the only part of these shallow frames that is original with me, all the other parts being the regular Hoffman-style shallow-frame, except that we have, for years, also used a heavier end-bar to strengthen our frame for rough usage.

The top-bar is just a plain strip of wood cut off of ⅞-inch stuff, which is the width of the top-bar, and just ½ inch thick. In other words, it is nothing but a ½-inch strip ripped off of a ⅞-inch board. This board, from which they are cut, is just exactly 18¾ inches long, all square and true, so that every strip will be exactly the same length, making every top-bar from it exactly 18¾ inches long. There is no groove on the underside for foundation, but only smooth and flat, and how to fasten it will be shown later. At each end, notches are cut out 3-16 deep by 15-16 inch long, leaving the ends 5-16 thick to hang on.

The end-bars are shallow Hoffman style, 5⅜ inches long and ⅜-inch thick, which latter makes a much stouter and stronger frame than was formerly put on the market, with the end-bars only 5-16 thick. This, in addition to the top-bar we use, makes it a much better frame.

For the bottom-bar just plain strips ¼x¾x17⅝ inches are used. We have tried slightly heavier bottom-bars, but with such a shallow frame it is not necessary to use them.

We have tried extensively both the long top-bar frames without the end-spacing staples on the end-bars beneath the ends of the top-bars and those with the staples. We find that after the frames, and the supers in which they hang, have been in use for some time, there is no doubt about it that the staple-spaced frames are better, and can be manipulated more rapidly. We have thousands of each kind in use, and as long as the ends of the frames, top-bars and the hive-rabbets are clean, there is not much trouble. As soon as the bees stick propolis into these intersections, the trouble begins with the long top-bars, and then the staple-spaced frames can be handled much more easily. This is quite an item to consider in bulk-comb honey production when short cuts and rapid



manipulations make us the more dollars and cents.

And, again, we want the best, strong frame possible for our purpose, for it differs from the production of extracted honey, in that since the combs are cut from these frames, the frames scraped clean and foundation put in each time they have been filled, they are handled much more, and therefore receive much more rough usage. Our frames are strong and easily manipulated.

The self-spacing idea is to be *greatly preferred* for our purpose, since all of our manipulations deal with whole supers of these frames, once they are filled with foundation, and the frames are not again handled until the finished product is to be cut out of them in the honey-house. We have tried many kinds, but the advantages of the self-spaced ever-ready-in-position frames beat them all; yea, not only that, but for our rapid, get-there, money-making work, unspaced frames are entirely out of the question for our purpose. *Our* system demands that when the frames are once ready for the hives, they be in the supers so that the whole thing can be "slapped" on to the hive in a second; the same when they come off in a wholesale manner when full. All this will be described in due time.

Returning to some of the advantages of our narrow, thick, top-bars, we cite their greater strength, no sagging, and hence no unevenness of the tops of the frames, allowing bur and brace comb building, which is a great nuisance in our rapid work; this extra strength at the same time making a stronger frame, allowing freer communication between the frames and from one story to another on account of the wider space between top-bars of one frame and the next, which is worth many hundreds of pounds of honey otherwise lost on account of the discouraging feature of the wide top-bar shallow frames; and making the examination of the contents of the frames much easier in that a glance between the top-bars of such frames reveals more than can be ascertained with wide top-bars and narrow spaces.

All of the above applies equally well, if not more so, to the brood-chambers if such shallow, narrow top-bar frames are used throughout, as we do in the hives we have described in a former article. By using these frames thus we have found them to be an ideal frame for all purposes, as well as for the production of fancy comb honey.

Light Honey Consumption this Winter—"Chunk" Honey

Bees have consumed less stores here this winter than usual. This is from two different causes, I think: the principal one being the steady cold we have had the present winter. The second one is, the bees were not as strong as they often are when we have a fall honey-flow. The past year was very dry, and we had no fall flow here.

Mr. Scholl, your articles on the production of "chunk" honey are very interesting reading, and show you have worked out a system pretty much your own, and that you have had much practical experience, both in the production and sale of such honey. I have worked my apiaries mostly for extracted honey, but am working my bees now more and more for "chunk" honey, for which I have a good demand. I hardly think the production of chunk honey will ever supersede section honey in the North as it has here in the South. There are several reasons for thinking this, a few of which I will mention:

In the first place, it would seem the people of the North had become thoroughly educated to the use, or consumption, of section honey, which is not the case in many of the Southern States. Then, it is seldom we have a *good* honey-flow of long enough duration to produce a first-class section honey; while in most of the Northern States the honey-flows are fast and strong compared with ours, and it is much easier to produce nice section honey there than here. Then, from my knowledge of much of the Northern honey, it is very much inclined to granulate, more so than the honey we usually put up here for chunk honey; and I want to caution the would-be chunk-honey producer there, as well as here, to be very careful about putting up any honey as chunk honey that is quick to granulate. From what I know of alfalfa honey, it would not be at all suitable to put up in that way. Some chunk honey was shipped into this locality a few years ago that was *all* granulated on arrival, and caused much dissatisfaction among the consumers.

So my advice to those who live in a locality that has fast and good honey-flows, where section honey is easily produced, to try chunk honey only on a small scale. No, I don't believe chunk honey will ever become as much of a staple article in the North as it has become in the South. L. B. SMITH.

Rescue, Texas.

DEAR MR. SMITH:—You surmise rightly when you lay the main cause of light honey consumption of the past winter to the long continued and steady cold weather, but since our *very strong, rousing* colonies have shown the same thing in that respect, it seems that the weakness of the colonies did not have so much to do with it.

It is not my intention, as stated in a former article, to have bulk-comb honey take the place of the section honey entirely, in the North, as it ha done here, in which you are right to this extent. But, Mr. Smith, it is a mistake to state that we seldom have *good* honey-flows here in the South, yea, even in Texas, and you'll have a big wasp's-nest full of bee-keepers jumping up and down on you if you don't mind, for we have many *ideal* locations where the finest section honey can be produced, and where the honey-flows for quantity and rapidity of the flows cannot be surpassed anywhere. On the other hand, I know personally, also, that there are just as many places in the North where the honey-flows are not better than you have in your own locality; where it is a difficult matter to produce good section honey; and where bulk-comb honey would prove much more profitable for the producer, and more economical for the consumer, than section honey. It is these we are trying to reach, as well as a multitude who *could make more money out of bulk-comb honey production* than section honey, *no matter* what kind, or how good, honey-flows they may have.

We want the would-be bulk-comb-honey producers to go slow, to be sure, and such a warning has been given already; but it should be tried by the majority on a small scale, at least.

As much of our honey here granulates just as readily as anywhere else, and it is not such a serious obstacle, I shall leave this for a separate article in due time.

National Bee-Keepers' Association

General Manager, N. E. FRANCE, Platteville, Wis.

R. L. Taylor, Chairman of the Board of Directors, has been having the grippe.

The winter losses of bees are quite heavy in places. Some report 75 percent loss.

Each new member gets a copy of the 1909 Annual Report free, as long as the supply lasts, which is getting low.

The present honey prospects are good except in Southern California, where they have had no rains for 9 weeks.

The membership enrollment today (March 26) is 3700. The President's mark of 5000 is fast coming in sight. Let the good work go on.

Information Bulletin No. 15 has just been mailed to members. This is of value only as each member uses it. To many it is worth the dues of several years.

If each National member would work to get new members like our recent candidate for President (Thomas Chantry) has done, we would number 5000 by the close of the honey harvest. Why not do this?

The second edition of "Bee-Keepers' Legal Rights" has just been mailed to the membership. It is a reference volume, which every bee-keeper should have in his library. Paid up members get a free copy. There are none for sale to outsiders.

If our members who produce extracted honey will follow the advice given in Information Bulletin No. 15, there will be a great demand for honey with hopes of better prices next fall. The bulletin contains the following on this subject:

GREAT DEMAND FOR HONEY.

"I have devoted much time to discover why so many complain of no market for their honey. I have asked 15 wholesale dealers why honey-sales were slow when other foods found ready sale at high prices. I also asked bee-keepers who buy tons of honey besides their own for bottling, and also asked many who used to be extensive honey-eaters, why they have dropped it from their daily food. Almost every one replies with this answer:

"'Good, well-ripened honey, sealed by the bees, and matured in the hives, is always in demand at fair prices. But this thin stuff, extracted before it is ready—before it is well ripened—that will sour—that never has either flavor or body—*that* is what spoils the market for honey.'

"Through the Information Bureau I have had sent me many offers of honey to sell. For several such lots I found sales, and later received word from the purchasers that the thin honey had no body or flavor, except souring. If every member of the National Association will promise me that *all his honey will be ripe, capped-over honey* before it leaves the hives, he will have a market which he never can supply. Our Association never can brand the honey of its members until this is done."

Contributed Articles

Bee-Keeping as a Business

BY F. GREINER.

A writer in Centralblatt has the following to say in regard to the reliability of bee-keeping now as compared to years ago:

> "Some 250 years ago quite a few people discovered that bee-keeping was a better paying business than many other enterprises, but conditions have changed considerably since then. Every business, every enterprise, if carried on at all, has to return a larger dividend than formerly, or it is found to be neglected. Even ordinary agriculture, with its more intense culture and use of machinery, is prominent as a well-paying business. It pays much better than bee-keeping. It is therefore not astonishing that bee-keeping and honey-production have slightly been retrograding. It must be acknowledged that apiculture has not kept pace with other enterprises when considered from the dollar-and-cent standpoint."

Whether all the above can be endorsed and subscribed to by us here in America is questionable. Can it be said that the business here has come to a stand-still? Do we produce less honey? Does it not pay us well to keep bees?

It appears to me that the bee-keepers in the United States turn out a great deal more honey than formerly. I have been in the businesses 35 years. At the beginning of this period we found *no honey* in our common groceries. It is now offered in almost every little store in the country in both forms— comb-honey and extracted. Judging from this, it seems that the output is proportionately larger than it was 35 years ago, saying nothing of 250 years ago. It is to be regretted that no reliable data are at hand for comparison. We haven't anything tangible even as to the amount that we produce today. Uncle Sam will tell us, I suppose, after the next census, just how many colonies of bees we have or had in the United States on April 15, 1910; what their value is; how many pounds of honey was produced in 1909; how much wax; and the value of these products. It is gratifying to know that, sooner or later we will be in posession of these figures. As to former years, of course we are depending only on guesses.

Our methods have advanced over former practices, as may be said of agriculture and manufacture. Even with the poorer bee-pasturage the bee-keeper is enabled to produce more honey, by 3 or 4 times, than he could years ago—not per hive perhaps, but with the amount of labor he puts into the business; and the prospect, it seems to me, is in no way discouraging.

I am not sure that we have as many bee-keepers, proportionately, as formerly, but many more of them keep larger and more apiaries. The business has really become a business, while it was formerly carried on as a side-issue of minor importance. The honey produced was almost wholly consumed at home—none entered into commerce.

Personally, I have the greatest confidence in the bee-business—more than I ever had. Considering the capital invested, and the labor required to conduct it, the returns from it are greater than from keeping poultry and growing fruit—at least it pays me better—and better than general farming does the average tiller of the soil.

Naples, N. Y.

Black or European Foul Brood

BY G. M. DOOLITTLE.

By turning to pages 644 and 648 of the American Bee Journal for the year 1884, a full and exhaustive treatise of foul brood may be found over the signature of Frank R. Cheshire, of London, England, who dug down into the matter more deeply than any, unless perchance, Drs. Phillips and White are excepted, ever found time to do. He there, and on pages 740 to 742 of the same volume, (more than 25 years ago,) calls this disease "bacillus alvei," and said so many things which were entirely foreign to our practical and lamented Moses Quinby of those days, that in absence of any reply from any of our (in those days) scientists, I ventured a reply on page 245 of the American Bee Journal for 1885. In this reply I said:

> "These words of Mr. Cheshire, found on page 646, 'the popular idea that honey is the means by which it is carried from hive to hive, and that mainly through robbing, is as far in error that only occasionally and casually can honey convey it from colony to colony,' are so directly opposed to our much honored Quinby's words, 'I drew all the bees from such diseased colonies, strained the honey, and fed it to several young, healthy swarms soon after being hived. When examined a few weeks after, every one, without exception, had caught the contagion,' that it is not strange that I began to wonder if here was not a mistake somewhere.
>
> "Again, Mr. D. A. Jones says, 'A single drop of honey taken from a diseased colony, is sufficient to start the work,' which, if arrested, is inevitable destruction.' While I always prize scientific research highly, yet to be valuable to me, such research must not run squarley against facts known to exist from practical experience. As hundreds of the practical apiarists of the United States *do know* that the foul brood of this country is spreading, and contagious mainly through the honey, the words of Mr. Cheshire sound very strangely to me when applying them to what I know of foul brood."

I have quoted thus largely, so that those of the younger members of our American Bee Journal family who may not be able to turn to the pages referred to above, may get a fair understanding of the case. And yet, right on page 644, Mr. Cheshire gives a description of *black brood*, now known as foul brood, that is more perfect in conciseness than any description which has yet appeared, no matter whether the writer be from this or any other part of the world. If Mr. Frank R. Cheshire were alive today, I should feel it a great privilege to ask his pardon for what I wrote in 1885, and confess to him that I was that "pig-headed" that the words "foul brood" got so near my eyes that I could not read "BLACK BROOD" in his description. And, right here I wish to say that by calling both of these diseases *foul brood*, it is exceedingly misleading at the present time, as many thus write and speak, without qualifying by using the words "American" or "European" before the kind meant. It would seem far preferable to have stuck to the old "black brood," for the European, even did it not "just suit the occasion," than to be mixed, as very many are when trying to express themselves in the matter. But to return.

The first I fully realized that Mr. Cheshire's "bacillus alvei" was our black brood, was at a bee-meeting 3 or 4 years ago, when Dr. Phillips told us that it had now come to light that the foul brood of Europe was not the foul brood of our American fathers, but what we had termed "black brood." Then the whole matter opened up to me, and I readily saw that when I was opposing Mr. Cheshire, for asserting that no bacillus or spores could be found in the honey of diseased colonies, he was right and I was wrong; the confusion coming about by *our* using the words *foul brood* as representing two almost, if not entirely, different diseases. *I know* that just *ONE* drop of American foul-broody honey going into a healthy colony will surely bring disease and death to that colony, as it is taken therein; and I am *NOW* as fully pursuaded that all the honey in a score of European foul broody hives will not carry the disease to *ONE* single colony, no matter if all the colonies in a large apiary partake of it; as was Mr. Cheshire when he said bacillus alvei (the same being European foul brood) could not be conveyed by the honey.

Now let me come back to Dr. Miller's article, found on pages 394-5 of the Amican Bee Journal for December, 1909, of which I spoke in my article last month. Dr. Miller says, "The regular thing is to shake on foundation or starters in the evening — that, probably, because safer from starting robbing." Just so. And I have been asking, "What is the use of shaking at all, if, as proven by Mr. Cheshire, Mr. E. W. Alexander, Mr. J. A. Green, Dr. C.C. Miller and myself, and many others, that European foul brood is *NOT INFECTIOUS* through the honey?

But one of our New York foul brood inspectors thinks it would be a dangerous thing to take the stand that the disease *cannot* be carried in the honey; and so this truth, as so fully brought out by Mr. Cheshire, has been kept hid from the public, to the vexatious toil, sweat and trouble of the hundreds and thousands of bee-keepers of the world, for fear some would become too lax in this matter, and thereby spread the disease.

Now, the disease *is IN* the honey, or it *is NOT*. Mr. Cheshire's pronunciation that it *is NOT*, has never been overthrown, not even by Doolittle (in his ignorance), and until it has been overthrown by positive proof, it seems wicked to keep the apiarists of the world laboring on that which amounts to nothing.

Dr. Miller tells us how some of the colonies which he shook deserted because he "starved" them too close, and to overcome this desertion he gave them sections of honey from *DISEASED* colonies (italics mine), then he left them a comb of honey from their *OWN* diseased hive; and finally he took to the Alexander plan, and left them all their diseased honey, but kept them queenless for a certain length of time, when all went well, and the disease disappeared in all alike. And that Doo-little man, has been sitting right down and hiding his" light under a bushel," because a few have said that it is not best that the truth be known; which light, if it had been let shine, would have saved the good Doctor all of his trouble of "shaking like sixty" during his weariness each *EVENING*, for fear robber-bees would get the honey, if he did it while he was rested in the morning.

Now about how colonies become diseased: As I have lent Mr. Simmins' book, so I do not have access to it, I must quote from memory. If I am correct, both he, and my old teacher in apiculture, J. Burtis, claim that "bacillus alvei, like many of the germ diseases of the human family, are always 'floating in the air,' and when conditions are right, they take possession, and the patient becomes sick, or dies from the disease, which they cause."

One thing has been very noticeable: When we have what we term "a poor year for bees," the disease has been at its worst; as soon as it changes to a good time for bees, those colonies having the disease, but still strong in numbers, begin to pick up, clean out the dead brood, and by the close of the white honey harvest, the disease has mostly, if not entirely disappeared; while a really good year, from beginning to end, the whole apiary presents the usual appearance that it does when no European foul brood disease is present. But, with the old American foul brood, there is no let up. It is always aggressive, and, as Dr. Miller well says, "the Alexander plan" (nor any other, short of ridding a colony of all the foul broody honey,) will not cure it.

Mr. Cheshire tells us on those pages away back in the American Bee Journal for 1884, that phenol or pure carbolic acid, *will cure* black brood (*bacillus alvei*). I have never tried it. If any have, they will benefit the readers of the American Bee Journal by telling us about the matter. I am well aware that carbolic acid has been tried on American foul brood (bacillus larvæ) and failed; but has it been tried with European foul brood (bacillus alvei) in the United States?

Borodino, N. Y.

Methods of Treatment of European Foul Brood Compared

BY DR. C. C. MILLER.

In treating European foul brood by the Alexander plan—and it should be kept in mind that only European and not American foul brood can be cured by that plan—a virgin queen is given 20 days after the removal of the old queen. If the cure is just as certain by giving the virgin 10 days sooner, the shorter period is better. Even if there are some failures by the shorter plan, provided there be not too many, it will still be better to use the short cut if the gain in the successful cases be enough to overbalance the loss in the cases of failure. So it may be worth while to attempt some comparison between the two ways, so as to form at least a little estimate as to the gain.

Suppose we have on the 31st day of May 2 colonies affected by European foul brood, the two colonies being exactly alike in every particular. Suppose each queen for the past six weeks has been laying at such a rate that the output of healthy bees amounts to 1000 daily. (As a matter of fact that sort of regular work does not take place, but it makes the problem easier, and for the sake of illustration it may serve just as well.)

An important part of the treatment is to have the colonies strong, or rather to make them so, for a colony affected by foul brood is not likely to be strong; so on the 31st day of May we will give to each colony enough brood in all stages so that 1000 young bees will hatch out of it daily in each colony. At the same time we will remove the queens. Counting 42 days as the life of a bee, there will be in each hive 42,000 bees. As there will be 1,000 bees dying daily, and 1,000 daily increase from the brood of the removed queen, and also another 1,000 from the added brood, there will be a net increase of 1,000 bees. So June 1 there will be 43,000 in each hive, and 63,000 June 21. On that date the last of the brood will have hatched out, so there will be no more increase. But the daily death-rate will continue, so there will be a loss of 1,000 daily, after June 21.

So far we have the same figures for each colony. Now let us see about the difference in treatment. One colony, which we will call A, is to have the regular Alexander treatment, queen-cells being destroyed June 9, and a virgin given June 20. The other, which we will call M, is to have the modified treatment, queen-cells being destroyed June 10 and a virgin given at the same time.

In each case the virgin is supposed to be just hatched. As each will begin laying when about 10 days old, the one in A will begin laying June 30, and the first young bee from her eggs will hatch out 21 days later, or July 21. Let us see how many bees there are in A on this latter date.

We found there were 63,000 bees June 21, and a daily loss of 1,000 bees after that. From June 21 to July 21 is 30 days, during which time the total loss will be 30,000. Take 30,000 from 63,000, and we have left 33,000 as the number of bees in A, July 21.

In M there will be the same figures except for the difference made by giving the virgin on a different date. She was given June 10, and may be expected to begin laying June 20. The daily output of eggs depends on the strength of the colony, and more especially on the number of the nurse-bees, or bees not more than 16 days old. As 2,000 young bees have been hatched out daily in the past 16 days, the nurse-bees will number 16 times 2,000 or 32,000. That is just twice as many as there were in the hive during the reign of the old queen, for as 1,000 young bees were hatched out daily there would be 16 times that number, or 16,000 nurse-bees. With twice the nurse-bees, the queen ought to lay twice as many eggs, so long as the number does not go beyond her capacity. With 16,000 nurse-bees the queen laid 1,000 eggs daily for the 1,000 bees that hatched out, and an additional number of eggs for the brood that died. But let us call it 1,000, to be on the safe side. Then the young queen in M, with double the number of nurse-bees, would lay 2,000 eggs daily. The first of these eggs being laid June 20, the first young bees would hatch out 21 days later, or July 11. July 21, or 10 days later, 10 times 2,000, or 20,000 would be the number of young bees from the new queen in M.

So we have 20,000 more bees in M than in A July 21. That is, there are 33,000 bees in A, and 53,000 in M. Just what difference that would make in surplus would depend on the season. In some seasons it would mean empty supers for A, and a fair yield from M. At any rate it would pay for a large percentage of failures by the shorter plan. My present opinion is that there will be no more failures than by the longer plan.

Marengo, Ill.

No. 2.--Making Honey-Vinegar

BY C. P. DADANT.

While the alcoholic fermentation is going on, it is necessary to keep the liquid at a fairly high temperature. Should you let it fall below 70 degrees, it might be difficult to start it again. But the liquid in fermenting will create a certain amount of heat which will help its work. Within a week, if all goes well, the change is such that there is next to no saccharine matter left. If the air has been excluded, the acetic fermentation has probably also begun, and you may readily detect it by the smell. If, however, this should fail to be produced, add a little good vinegar, or what is called "vinegar-mother," taken from the old vinegar barrel. Let it be free from musty smell, or you might perpetuate this smell. Keep the barrel in a warm place in the shade, if possible, while this is going on. Many persons keep their vinegar barrel out-of-doors in the sun. I do not like this because it warps the upper staves and spoils the barrel in short order. Besides, it evaporates too much of the liquid.

After the acetic fermentation has begun, all it needs is plenty of air and sufficient warmth. Practical vinegar-makers succeed in making good vinegar in 48 hours after the alcoholic fermentation, by letting it drip slowly in a warm atmosphere through a barrel containing oak or beech shavings, which have been previously dipped into good vinegar. The barrel is bored at both ends, and the liquid that has gone through the alcoholic fermentation goes in sweet at the top and comes out sour at the bottom. But you could not succeed in doing this with unfermented honey-water.

When either fermentation is incomplete, the result will be a vinegar, sweet, alcoholic and sour at the same time. Such vinegar might do for sweet pickles, but not for ordinary sale.

If you follow the simple process mentioned above, without the extra work of passing it through shavings, you may make good vinegar in 2 or 3 weeks. Much depends upon the completion of the first fermentation. After that, the acetic change will push itself forward without interruption, unless you let the temperature fall, or exclude the air.

Transferring the vinegar, or what is ordinarily called "racking;" in other words, taking it from the dregs, will increase its strength because it helps to oxidize it. The oftener this is done the clearer it will be, and the stronger it will become.

The vinegar should be fully matured before winter, even if you wait till the grapes are ripe to make it. To keep it during winter, put it in a warm room. The cellar will do. If you have a furnace, a corner in the furnace-room is quite satisfactory, even with the feature of a little coal-dust, which would settle at the bottom. But if the vinegar is sufficiently strong it may be bunged and put away anywhere. If you have a barrel of strong vinegar and one of unfinished vinegar, add a little from the latter barrel to the former every time you draw some for your use. In this way you will keep it active, and the weak vinegar will gain strength.

To draw vinegar from the barrel, as faucets are apt to leak and get out of order, we use a small hose about 6 feet long and a half inch in diameter, and draw the vinegar by syphon. This hose is used for no other purpose, for it would give the vinegar-germs to other liquids. We keep it hung right by the barrel. But before you attempt to use such a device, be sure that you have tried it with clear water first, and that you fully understand the principle of the syphon, otherwise you would risk taking an unpleasant drink of vinegar partly in your windpipe, and I should want to be out of your way then. After a little practice one may draw a liquid from a barrel with a syphon without even tasting it.

Housekeepers should be warned against keeping open vinegar vessels in apartments or cellars where open jars or bottles of preserves, or marmalades, or cider, or claret, or even grape-juice, are kept. The germs of vinegar will pervade the air and act upon anything which may have a tendency to sour.

A damp cellar will in no way injure vinegar. A very dry cellar will cause it to evaporate. In that case water may be added. Our make of vinegar by the above process is so strong that our women use about half water in making pickles. But be sure not to allow any musty or moldy action. When the vinegar is thoroughly made, do not leave the barrel open unnecessarily. It needs no air then, and will only gather impurities.

Do not expect your vinegar to improve with old age. After 3 or 4 years in this hot and cold climate, vinegars and wines have nothing to gain from age. It is only in the deep cellars of mildly temperate Europe that great age has good effect on wines or vinegar, and I doubt whether the latter is improved by great age in any climate.

When the vinegar has attained its highest point of excellence, you may best keep it by bottling it. Very few, however, go to that trouble, owing to the low value of even the best vinegar. Its deterioration is evidenced by the forming of the vinegar-mother, which is nevertheless a very good adjunct to use in new vinegar when the acetic action is slow. But some authorities object to it under the plea that it hastens the deterioration of the fresh article. A still better agent to hasten the fermentation from alcohol to vinegar is what is called the "flowers of vinegar," a fungus which is the base, the real cause of acetic fermentation. These flowers appear on the surface of all good vinegar in small white particles resembing mold, and are scientifically named "mycoderma aceti." Not only do they form in the making of vinegar, but they will often appear on ciders and wines previous to acetification. In those cases, the only prevention of vinegar fermentation of those beverages is by heating and sealing afterwards.

Another so-called disease of vinegar is the vinegar-eel—anguillula aceti—a very small helminth, visible, however, to the naked eye, if you place the vinegar in a very thin flat vial, and hold it between your eye and the light. This is never found in artificial vinegars made of injurious acids. So the vinegar which contains them may very positively be considered as pure, honest goods. They are very easily destroyed by heating to about 140 degrees, Fahr. They will then settle to the bottom of the vessel and may be taken off with the dregs.

If you want very clear vinegar, you may clarify it, after heating, by using the white of eggs. For a barrel of vinegar it would take a half-dozen. Pour them into the barrel and stir vigorously with a stick or a wooden spatula. The white of eggs well mixed with the liquid makes a sort of network which in settling takes with it all the floating impurities. Drawing the liquid off carefully, without stirring, after 4 or 5 days will secure a very limpid article. But this trouble should be taken only with thoroughly finished vinegar.

Cider or wine vinegar may be treated in exactly the same way as honey. Good cider and honey-water mixed make excellent vinegar if air exposure and temperature are right. In general, those who fail to make good vinegar have been at fault in providing insufficient heat or warmth at the inception. Summer or fall is the proper time. Late fall or winter is a poor time to make good vinegar.

Do not forget that you need never lose any honey from cappings, or from the washing of honey-soaked utensils. The first water used need not be of great amount. Water from cappings washing will look very dirty. Just heat it and get it to ferment, and after the fermentation is stopped you will find that all impurities have settled to the bottom. As those impurities are entirely composed of particles that you would eat without second thought, when sealed comb honey is served upon the table, I cannot see why you should object to them in your vinegar, especially if they are left in the dregs when the liquid is racked. Many a beekeeper wastes a lot of good honey by failing to wash the cappings before rendering them into wax. We usually let them drain for several weeks previous to rendering them, but there is always enough sweet left in them to make a quantity of first-class vinegar, which is all net profit to the apiarist. Economy is the mother of thrift.

I have often received beeswax (shipped to me by good apiarists) that fairly leaked honey, even after it had been rendered and boxed for shipment. This is an unnecessary waste. We never allow a drop of good honey to be wasted.

Hamilton, Ill.

Plague of Ignorance—Hornets

BY ALLEN LATHAM.

The title of this article is chosen because of the title found on page 371 of the American Bee Journal for 1909. Ignorance is a plague which affects us all from earliest childhood, and one in which none of us ever becomes better than convalescent. Therefore, W. A. Pryal is very human in his ignorance, though he may not be wholly human in his method of vindicating his ignorance in his destruction of the hornets.

Possibly hornets in California are of a different breed from what they are in Connecticut, and their destruction there may be justifiable. I feel rather confident, however, that their habits there are much the same as they are here; and it is likely that the country over, these insects, though usually considered a pest, are among man's best friends. Last summer a farmer told with great glee about getting into a yellow-jackets' nest while haying. The gleeful part was that in which he "stomped it into the ground." Possibly some of my readers wear the same astonishment on their faces now that he wore when I told him that he had killed one of his best friends.

It was 25 years ago that I first learned of the habits of the yellow-jacket. I had taken up a war against the tomato worm, and being then a boy I hanged 14 fat fellows on the rail fence with bits of twine. The next day disclosed the fact that all the worms were not all there. Pausing to note the fact I observed a yellow-jacket cutting off a piece of tomato-worm steak to carry home to the children. Within 3 days only the heads of the culprits remained on the gallows. The lesson was instructive. It set me to thinking and to watching. I learned little by little that these striped pests (the yellow-jackets) made a regular diet upon the larvæ of moths and butterflies. I gradually came to know what these hornets were searching for when I saw them poking about the foliage of a tree or bush. It is a common sight for one who looks for it to see a yellow-jacket flying along with a caterpillar hanging from its jaws. And the busy chaps that are steadily returning to their beautiful nest are carrying the chewed remains of one of our enemies.

There is not the slightest doubt in my own mind that insect pests would be beyond our control but for the hornets. It is a sad fact that their worth is little known, and, when it is learned, is not much more than half believed. It does seem that a bee-keeper should not feel so strongly against the sting of a hornet that he thereafter counts that insect his mortal enemy. I almost have to laugh at the attitude which Mr. Pryal has taken, for it is almost identically the attitude the public takes on the subject of honey-bees—and Mr. Pryal is a bee-keeper. But if Mr. Pryal continues to set his trap for hornets he deserves to be put out of the brotherhood.

The hornets—and by that term I mean both yellow and black—are carnivorous insects, rarely paying much attention to honey. Still, the yellow-jacket shows its kinship to the bee by filling up with honey when the caterpillar season is slow. The queen hornets, too, not infrequently try to get at the honey of the hive in early spring. The main food supply, however, is meat. They are insect scavengers and tigers. They accept living or dead insects. A single nest with its hundreds must destroy unnumbered larvæ of many kinds. It takes by preference the naked larvæ, such as the cabbage-worm, the larvæ of the Cecropia, Polyphemus, and other large moths, and the cankerworm, etc. These are taken while small, and carried off bodily. This hornet will carry off the larvæ of the Imperial moth—a beautiful moth, but most destructive as are all the moths in their larval stages. I have known an adult larva of this moth to consume 19 leaves of the European linden in the space of one night, by actual count. This larva grows to be the size of a man's finger. A single moth lays over 200 eggs. Suppose the caterpillars were not taken care of, what then? How much has Massachusetts spent in trying to keep in check the gypsy moth? Probably over one million dollars—and the end is not yet. The gypsy moth comes from a foreign shore, and has no natural enemies here, hence it muliplies as moths can multiply. Our own native moths are kept in check by natural means.

Let every bee-keeper spread the truth in regard to hornets of all kinds. *They are our friends.* Let them alone and they will let you alone. Many an hour have I spent with my face in close proximity to their nests, studying their habits. They resent any molestation of their nests. Who would not? They sometimes resent sudden motions near their nests. Long experience has taught them that sudden motions are frequently followed by nest destruction. They never resent gentle motions, and pay no more attention to a man than to a tree, if the man knows his business.

Deliver us from the plague of ignorance. Norwich, Conn.

Convention Proceedings

Report of the Michigan Convention

The Michigan Bee-Keepers' convention was held Feb. 23 and 24, 1910, at Lansing, and was pronounced by all present to be one of the liveliest the Association ever held. Not a dead minute during the two days' session. President Aspinwall kept things moving every minute.

AFFILIATION WITH THE NATIONAL.

The convention started out with the Secretary's report, which brought out some good, live discussions right from the start. The question of continuing in affiliation with the National was discussed, with arguments put up both for and against it. It was finally decided to remain as before; but as it was deemed advisable that the Association should have a larger working capital, the dues of the Michigan were placed at one dollar per year, with an extra half dollar to go to the National, or $1.50 for the two. Of course, a person already holding membership in the National could become a member of the Michigan by paying the dollar. It was also voted that the membership of each should expire on Jan. 1st of each year. This brings the renewals all at one time.

WIRING FRAMES—MAKING COMB FOUNDATION.

The question of wiring frames to prevent sagging came up as a result of the paper sent by Manager N. E. France, of the National, and caused a lively discussion. The concensus of opinion, however, seemed to be that no matter how your wired, the foundation would sag as long as it is made as at present. The following resolution was the result of this discussion:

> "Be it resolved by the Michigan Bee-Keepers in convention assembled, that the manufacturers of comb foundation be asked to consider the question of making brood foundation so it will hang just opposite to the way it is made now, the object being to prevent sagging."

FOUL BROOD.

Ira D. Bartlett, of East Jordan, was also on the program for a paper on "Foul Brood," but owing to sickness in the family, was unable to be present. His paper was read, however, by the Secretary, and created much favorable discussion.

HONEY—ITS USE AND ADVERTISING.

The convention was favored by the presence of Pres. George W. York, of the National, also L. W. Boyden, of the A. I. Root Co. Mr. York read a paper on "Honey, Its Marketing and Staple Use," and Mr. Boyden contributed some valuable suggestions to the discussion on the advertising of honey. Among other things he suggested that the use of honey be demonstrated at pure food shows; also suggested having samples of the different flavors of honey put up in such a way that the public could sample the same.

VARIOUS PAPERS AND DISCUSSIONS.

Among the addresses given were "The Bee-Keepers' Real Problem," by the Secretary; President's Address by L. A. Aspinwall; "Science and Theory of Bee-Keeping," by Hon. Geo. E. Hilton; and "Some of My Experiences as a Farmer Bee-Keeper," by W. J. Manley. These all brought discussions along their various lines.

MICHIGAN MEMBERS' BOOKLET.

It was decided to continue the publication of the booklet which gives the names and addresses of the members in good standing having honey for sale. This year it is to be gotten out about Aug. 1st, and there is to be 1500 printed. This booklet has been a big help to the members in selling their honey. Last year it was sent all over the United States, and the great cry at the convention was that the members could not supply the demand for honey. One bee-keeper who produces probably at least 10,000 pounds of honey annually, stated that he could sell ten times that amount, and gives the entire credit to the booklet.

NEXT CONVENTION—SELLING HONEY.

The next convention is to be held in the fall, in Grand Rapids. The Association now has nearly 200 members, and a strong effort is to be made to increase this number greatly by the next convention. This Association is carrying out a practical plan of co-operative selling with no expense to the members other than their annual dues.

The old officers were elected to succeed themselves, and are as follows: President, L. A. Aspinwall, of Jackson; Vice-President, E. D. Townsend, of Remus; Secretary-Treasurer, E. B. Tyrrell, of Detroit.

Hon. Geo. E. Hilton was elected to represent the Association at the State Legislature on foul brood legislation.

The Executive Board was authorized to appoint a representative to attend the next National meeting.

The books of the Secretary were also audited by an Auditing Committee, and the following report made: Total receipts, $200.41; total expenditures, $158.80. Balance on hand, $41.61.

AWARDS ON EXHIBITS.

Prizes were won as follows: Best 10 pounds of comb honey—1st, C. S. Foote, of Ridgeway; 2d, L. C. Wheeler, of Barryton. Best 10 pounds of extracted—1st, A. D. D. Wood, of Lansing; 2d, L. C. Wheeler. Three pounds of extracted containing least water—1st, L. C. Wheeler; 2d, A. D. D. Wood. Best 10 pounds of beeswax—1st, A. D. D. Wood; 2d, J. H. Peters, of Detroit; 3d, L. C. Wheeler. E. B. TYRRELL, *Sec.*

Worth the Money.

With reference to the advance from 75 cents to $1 a year for the American Bee Journal, I think, considering what we get, no subscriber should raise any objection. I consider "Dr. Miller's Question-Box" alone is worth the money, to say nothing of the Journal as a whole. WALTER NEWELL.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
DR. C. C. MILLER, MARENGO, ILL.
He does NOT answer bee-keeping questions by mail.

Black Honey-Dew.

1. What is black honey-dew?

A HOOSIER.

ANSWER.—Honey-dew is that which is gathered by the bees from the secretions of aphids, or plant-lice, and varies in color. Some of it is very dark, as dark as buckwheat honey, or darker, and this is probably what is meant by "black honey-dew."

How to Know Drone-Comb.

In reading the American Bee Journal, I see drone-comb spoken of a great deal. Please explain how I may be able to know drone-comb.

UTAH.

ANSWER.—Lay a rule on the surface of the comb. If the cells measure 5 to the inch they are worker-cells. If they measure 4 to the inch, they are drone-cells.

If you buy a text-book on bee-keeping, it will be worth to you many times its cost.

Colony Mostly Drones—Extracting Early Honey.

1. We have 15 colonies, and store them in a building. Why is it that some colonies are all drones? We had a colony last season that when we opened the hive had all drone-brood, so we cut it out, and it seems it was due to the queen. They had very few workers, so all the honey the bees would gather they would consume. We have both Banat and Italians. The Banat is a very good bee. We have all our queens clipped.

2. Is it advisable to extract early honey as soon as it is gathered? Is there any danger of it geting sour?

IOWA.

ANSWER.—1. Either, as you suggest, the colony has a drone-laying queen, or else it is queenless and has laying workers.

2. It may be extracted early if it is sealed; but neither early nor late honey should be extracted before sealing. It may sour, and the flavor may be poor.

Foul Brood and Stray Swarms—Spring Management.

1. Is it dangerous to take in tramp swarms of bees, that is, swarms we find hanging on the fence or trees in summer, apparently without an owner? Is there danger of foul brood?

2. How will it do to put on the strong colonies in spring a super of drawn-combs for the queen to use for brood, then supers above that for surplus? or would it be better, when she gets that super full of brood, to put her below, and put a queen-excluding honey-board between that super and the main brood-nest? Would I get stronger colonies?

IOWA.

ANSWERS.—1. A colony of bees in a tree may have foul brood as well as one in a hive. So may a swarm found hanging on a fence or a tree, but there is not so much danger in this case, for a colony badly affected with foul brood is not so very likely to swarm.

2. Very likely the plan is all right, but you do not give the size of hive, nor say whether comb honey or extracted is meant, and something depends on this.

Wax-Worms—Ripening Honey on the Hive.

1. I have been troubled with what, I think, you would call wax-worms. They are very, very small, probably ⅛-inch long. They bore into the sections, and bring out small batches of borings, which resemble fine sawdust. They are very difficult to see. I have also seen where they were in my brood-combs. I have searched Root's '"A B C and X Y Z of Bee Culture," and all the bee-literature I can get, but can't find anything more than merely a mention of them. Can you suggest a remedy?

2. How long is it necessary to let honey (section or extracted) remain on the hive to be properly ripened? I have been keeping bees in a small way for several years. At present, I have only 6 colonies, but I expect to increase to about 30 this year, by purchasing some early swarms.

MISSOURI.

ANSWER.—1. You have nothing but the common wax-worms, which you will find treated in the books under the head of bee-moth. Only they do not treat very fully of the very young larvæ that you speak of, with their fine sawdust, which is perhaps more like flour than sawdust. It is simply the gnawings of the little pest, dark in old combs and white in white sections. Fumigate your sections lightly with sulphur, or perhaps better still with carbon disulphide—bisulphide of carbon it has usually been called. The preventive measure is Italian blood.

2. Generally it may be taken when sealed, although the honey is better to be left on the hive some time after being sealed. But whiteness of comb requires that sections be taken off before darkening of the comb begins, so the rule is that the sooner sections are taken off after being sealed the better. But I have known it to be the case when honey was coming in with a rush that sections were so quickly sealed that the honey would easily become watery after being taken off the hives, unless very carefully kept.

Rearing Brood in Winter—Other Questions.

1. Why do bees rear brood in December and January? They had very little honey.

2. I ordered 6 untested queens, and lost 3 of them, and the other 3 are hybrids. Do you advise buying tested queens?

3. Last summer I took a queen out of a strong colony, and put her into a cage, and put her in the shade for about 5 minutes; when I looked at her she was dead. What killed her? The day was very warm.

4. How many pounds of honey ought bees to have at this time—March?

WEST VIRGINIA.

ANSWERS.—1. It is nothing unusual for bees wintered outdoors to begin rearing brood in February, especially as far south as Virginia, and not so very unusual in January. I think December is unusual, and I don't know why any of yours should begin so early. Possibly there is some difference in the bees themselves, and possibly something in their conditions.

2. Depends on circumstances. Usually I should advise buying untested. I think your experience was unusual. That the half that lived would prove hybrids looks a little as if the whole might be hybrids, and probably you would do well to order elsewhere next time.

3. I don't know. In the shade she would have lived all day, unless she starved. The only thing I can guess is that she may have been injured when caught.

4. Hard to say in exact figures. At a guess, I should say there might be danger of shortage with 10 pounds, and twice that would do no hurt.

Making Increase—Italianizing.

1. Is it safe to make increase by taking 4 frames of brood from a strong colony with the bees, place them about one hundred feet from the old stand, give them a good queen, feed them until bees are gathering honey and pollen, then add full sheets of foundation from time to time, as much as the bees can cover? About how long will it take till they will have from 7 to 8 frames of brood, under ordinary circumstances?

2. I have 2 colonies of 3-banded Italians. I intend to run one for extracted honey for my own use, and would like to increase the other to 5. Do you consider it safe to do so on the above-mentioned plan? I am going to buy my queens. I am a beginner, have 4 colonies, but have 2 of them with my father on the farm; those 2 are hybrids. I intend requeening them, and get the 3-banded Italians.

ILLINOIS.

ANSWER.—The plan is safe, unless you should operate at a time when no honey is coming in, as in that case there might be danger of robbing. They might build up in about a month.

2. Safe enough; but can you do it? That is, can you get from one colony so many frames of brood with adhering bees as many as 4 times in one season? Hardly, unless in an extra season.

Italianizing Bees.

1. I have only black bees in Danzenbaker hives, except 2 in box-hives. How would it work to put an Italian queen on the top of the frames in a new hive filled with full sheets of foundation—place it on the old stand and move the old hive to a new stand—what would be the best time of day to move the old hive, and if moved at night, would not most of the bees return to the new hive on the old stand?

2. In case of box-hives what would be the result if I should place them on top of new hives with full sheets of foundation, and the queen in a cage on top of the frames, with an escape-board between the hives so the bees could pass down in the new hive; leave them 24 hours and then remove the box-hive to a new stand—would the queens be released and accepted in these cases if it is done in spring when they are strong and nearly ready to swarm?

3. After moving the hives in the first question, suppose I should open the old hive, kill the black queen and put a queen in the cage on top of the frames, would not the young bees release and accept her? and wouldn't she take care of any queen-cells in the hive weakened by taking away practically all of the worker force?

ANSWER.—If you make the move at night, you might find an empty hive with no queen the next morning. The field-bees will return to the old stand, no matter what time of day or night you make the move. The thing is to have them stay there. It should be at a time when a large number are returning from the fields, so that both bees and queen will feel encouraged to remain. The best time is when the most bees are afield, and when the young bees are in the midst of a play-spell. I tried it once successfully with empty combs; I would hardly expect it to do so well with foundation. A frame of brood would make it all right, and for safety the queen should be caged.

2. Yes; of course understanding that the cages are provisioned so that the bees will eat out the candy and release the queen.

3. Yes.

Management to Prevent Swarming.

1. There is nothing I am more anxious about than the swarming problem, as I have nearly 300 colonies. I have just read about shaving off the heads of all capped brood to stop swarming. I think this may stop it, but I do not like the way, as there is a loss in some cases. I would like to try the plan, or a modification of the plan, I tried last summer, and would like suggestions from you. My bees were run for extracted honey at one yard, and were in 2-story, 10-frame hives. When they were quite well filled with brood and honey, and a good many had queen-cells under way, I placed a hive of empty combs under the 2-story hive on the bottom-board; into this hive of empty combs I put one frame of brood and the queen, and confined her there for the rest of the season. The two upper stories contained the brood, all but the one frame, and the lower story had enough empty combs to keep her busy for some time. Up to this time the entrance was at the bottom-board; I now changed it, by making an entrance at be top of the lower hive and over the queen-excluder, which covered the lower hive. This entrance was made by raising up the front of the second story, and putting in a block. The lower entrance was now closed. The bees in the lower story with the queen had to pass through the excluder in going and coming from the field. As the brood hatched from the two upper stories, the combs were filled with honey, and there was no excluder to bother the upper bees.

Now, I will tell how the plan worked. The bees swarmed well, and made a good crop of honey; a 70 percent increase, and about 25 percent of this came from the mating of young queens above the excluder, making two colonies on one stand. How could you have managed differently, so there would have been no swarming? Would breaking off the queen-cells from brood-combs above the excluder have done it, or all but one cell?

2. Would both queens try to fly out from the same stand, one above the excluder and the other below, in case of swarming?

3. By keeping all queen-cells broken off, after putting the brood above the excluder,

and have the queen confined to the lower story under the excluder, what percent would try to swarm? New York.

Answers.—1. Pretty surely, if no cells above the excluder had been allowed.

2. I think so.

3. I don't know. Possibly not one.

You have used a variation of the Demaree plan. Here is the plan: Put all the brood in the second story over the excluder, leaving the queen below with empty combs or foundation, destroy all queen-cells at the time of putting up the brood, and also 10 days later. With some this proves an entire preventive of swarming, while others say there are some failures. Whether putting the one brood-comb below would make any difference I do not know. Neither do I know what difference was made by your change of entrance. I should be afraid that when you wedge up the second story the larger space would be filled with bur-combs.

Caging Queen Over a Colony—Other Questions.

1. When a queen is taken from a colony, and caged over another, what kind of a cage do you use?

2. Do you put candy in the cage?

3. Can she be returned to her own colony without introducing?

4. How long after a swarm issues can it and the original colony be united without fighting?

5. When part of a colony is drummed out, can the balance be united with them 21 days later without fighting?

6. I have directions for uniting bees after the honey-flow, by uniting the brood in August and September; this leaves a queen and a lot of old bees to dispose of. What would you do with them?

7. I use 8-frame hives on account of their light-weight, for extracting honey. Does one story give enough room for brood, or would an extracting super on top be better? Tennessee.

Answer.—The cage that is listed in the catalogs as Miller's queen-catcher and introducing cage, although I vary the construction. But almost any cage will do.

2. Sure.

3. Yes, if she has not been away more than a day or two; but sometimes she may have acquired a strange scent that the bees do not like.

4. I don't know. It depends somewhat on circumstances. I should guess that there might be trouble sometimes in a week, and sometimes none in a month. But in the latter case it would be when honey is coming in well, and when almost anything would unite peaceably. But mind you, I don't know.

5. Generally, yes.

6. I can hardly understand how such a course would be advised unless it were intended to kill the old queen and old bees.

7. For a good strain of bees 8 frames are not enough for the building up, although they may be enough after the harvest begins. But even then more room might be better for extracted honey.

Making Increase — Shade-Boards — 8 or 10 Frame Hive—Feeding Honey-Dew.

1. I have 8 colonies of bees, and would like to increase to about 16. I have all Italian queens, and do not care to select any particular queen to rear the young queen for the increase, as I have no time to watch for natural swarms, and would like to try a way of making artificial increase. The following is my plan—let me know what you think about it:

I am going to get my colonies as strong as possible before the honey-flow, and when the swarming season comes I will look through them every few days, and if I find any building queen-cells, and preparing to swarm, I will take a new hive with frames filled with full sheets of foundation, and go to the colony which is getting ready to swarm, and lift out one frame with eggs and young larvæ and the queen, hang it in the new hive, then remove the parent colony, and place this new hive with frame of eggs, larvæ and queen on the old stand, and then brush about ¾ of the bees remaining in the parent colony, and place this new hive with frame of eggs, larvæ and queen on the old stand, and then brush about ¾ of the bees remaining in the parent colony in front of the new hive, then move the parent colny in front of the new hive, then move the parent colony to a new location and destroy all the queen-cells except the two best ones. Would this plan work?

2. Do you keep shade-boards on your hives during the hot season, or do you let them stand in the open sun?

3. What is the color of a drone from a leather-colored Italian queen? I bought a red clover queen from a breeder in Kentucky and her drones are almost jet black. Was she a full-blooded queen?

4. I adopted the 8-frame hive when I commenced with bees, but I think I made a mistake by not taking the 10-frame. I need some more hives. Would you advise me to take the 10-frame, or would it be better to stick to the 8-frame exclusively?

5. I have some honey which I would like to feed my bees in the spring; mix it with water, half and half, and give each colony ½ pint at sundown every day in an Alexander feeder. Would this cause the bees to start robbing? Illinois.

Answers.—1. Your plan will work if the queen-cells are sealed. Indeed, you would hardly need to destroy any cells, for the colony will be so much weakened by having ¾ of its bees taken away that it will hardly think of swarming. Besides, if you leave 2 cells you will be about as sure of swarming as if you leave a dozen. If the queen-cells are unsealed, they may not be well enough fed to make good queens in so weak a colony.

2. Sometimes I have used shade-boards, but mostly my hives have the shade of trees, not so much for the bees as for my own comfort when working at them.

3. Pure Italian drones vary very much, from being mostly yellow to very dark. If the workers of the yellow-colored Italian show the 3 bands, you may call the drones pure, no matter what color.

4. So long as the same frames are used in either, it would not cost you much to try the 10-frame hives side by side with the 8-frame, and then you could tell better than any one else which suits best. All this if you run for comb honey. If you run for extracted honey, I would advise you to change to 10-frame hives without any experimenting.

5. No, if you keep all well covered so that bees from outside can not get at the feed next morning.

Transferring — Spring Feeding — Old Comb Foundation—Jumbled Combs.

I have kept a few bees for 3 years, and am now starting with 70 colonies. I will devote all my time to the bees. I am using 8-frame hives, and running for comb honey. I have bought 10 box-hives, and want to transfer the bees to frame hives. When should I transfer?

2. Should I transfer from odd-sized hives to standard?

3. I am now feeding ¾ pint of thin sugar syrup once a day to each colony, in Alexander feeders. Am I doing right?

4. When should I put in new queens, and which are the best, Southern or Northern bred queens?

5. I have about 40 pounds of light foundaiton, 2 years old, and it seems dry. Should I use it, or have it worked over?

6. I have a number of hives in which combs are built cross-wise, and others in which the frames are stuck fast and combs built over. Should I loosen them all up, and try to have the frames all worked free so that I can handle them at any time? If so, when should I work them over?

7. Would it be better to transfer the bees from hives with crossed combs to new hives?

8. Have you queens to sell? If so, please quote me prices. I will want 12 or more. I have hybrids now, and want a good strain of Italians.

9. I think my bees are in fairly good condition, and I want to increase all I can this season. I will try the Alexander plan of increase, or can you suggest a better? Kansas.

Answers.—1. You can transfer in fruit-bloom, or perhaps better wait till the colony swarms Hive the swarm in the right kind of a hive, and then break up the old hive 21 days later, melting the combs, unless you prefer to transfer the best combs and form another colony.

2. Not so very important, but on the whole it is better to have only one size of frame in the apiary.

3. Maybe, and maybe not. Likely a little safer without the feeding, unless the weather is very warm for the first half of March. In my own practise I feel it is safer to do no feeding except to make sure there is abundance of feed in the hive.

4. All things considered it may be well to wait till June, although if you want to rear queens from your new stock you can get one earlier from the South, or else a last year's queen from the North. There ought to be no difference between Northern and Southern queens, only a queen may be reared earlier South than North, and a queen reared too early is not likely to prove so good.

5. The probability is that it is all right to use it as it is.

6. By all means get them in such shape that each frame may be lifted out. Do it when bees are gathering, at which time they will quickly mend all breakages; and it is better to do it before the combs are filled with honey. In fruit-bloom is a good time.

7. Not if the old hives are all right.

8. I don't sell queens except now and then as accommodation, and don't think you would want queens from me, for my best queens are generally hybrids, and there is danger of foul brood here.

9. It doesn't make so very much difference what plan of increase you use, only so that you manage to have all colonies *strong* before winter. Remember that it is more important to have a large number of bees in each hive than it is to have a large number of hives with a small number of bees in each.

Using Old Foundation—Ventilation to Prevent Swarming—Using Moldy Combs—Getting Swarms Cheap.

1. Seeing that article in Gleanings, by F. Greiner, in regard to bees being slow to go to work in last year's foundation rather disturbed my peace of mind, as I have a large quantity of starters (50 pounds) left from the total failure of last year, and suppose you are in the same fix. Part are in the sections and part in the box, as it came from the factory, and it ought to be all right, I should think. I dislike cutting those out of the sections. as they are put with hot wax, on three sides *ala* Yoder, which plan I am sure, if you tried once, you would never have any further use for a Daisy machine. It is far faster for me, anyway, than the Daisy, and saves so much trouble with the full sheets buckling so.

2. How would it do to raise up an ordinary 8-frame hive, and put a super under it through the swarming season to help keep them from swarming? Probably the sections would be badly stained. My bees are black, and being near the house and neighbors, I cannot handle them as I would like to, to prevent swarming, etc. I will have the yellow bees some day, I hope.

3. I have a large number of empty combs which I bought this winter, in which the bees have died, and parts are moulded and smell badly. Where would you store such combs? I always have them in the cellar to keep the moths away. How can I get my bees to clean them up so I can use them for extracting, and to hive the new swarms? I have noticed that it is hard to get the new swarms to stay in such hives, but I suppose it would help to give them a frame of brood.

4. Part of the hives I will take to a neighboring bee-man, and he will fill them with his new first swarms, for $1.00 a piece. This is quite cheap, is it not, and ought to pay me to do it? The bee-keeper in question has 40 or 50 colonies, and some years he does not get enough honey to supply his family. A friend of mine who is rather deaf, and misunderstood what I said, told the bee-keeper how well my bees had done the last year, and what a lot of honey I sold. He said he did not believe it at all. If I got any honey, it was because I fed my bees sugar and molasses, and the bees had made that into honey. Just think of it, from a man who has kept bees for years and years, and then the ideas and questions that otherwise well posted people will ask about bees are sometimes very amusing. I have noticed when you get a good crop at Marengo, we do here, too, although the conditions must be far different, as this is a very hilly country; but 1908 was a bumper year, also 1903. New York.

Answers:—1. If it would be just as convenient, I would put foundation in sections and have it on the hives within 24 hours after it left the mill. The fresher it is the better. But although I believe it makes a difference to have it fresh, I think that difference is very little. As a matter of convenience the foundation is put in my sections some time before the next year. I have had them filled all right after having stood in the supers for 4 or 5 years, so long as they had never been on the hives. Even if they have been on the hives they are all right if they have not been on *when the bees were idle.* It never seems to do any harm to have them on a little too early, but if they are left on after the harvest closes, and more or less painted with propolis, the only thing to do is to pull out the foundation and melt it.

It takes some degree of expertness to succeed with the Daisy fastener, and some make slow work of it. Possibly with enough practise they would do all right.

2. I'm afraid the sections would be darkened, but if you would raise the super before the bees began sealing any sections it might not be so bad.

3. Leave them piled up anywhere in doors or out, so they will have the benefit of freezing to kill any eggs or larvæ of the moth. The moth will not disturb them till the weather is quite warm and bees are flying well, even if left till in June. In fruit-bloom you can set a hive-body filled with combs under a strong colony, forcing the bees to go down through the idle combs, which the bees will clean out. When well cleaned out thus, I think you will find that the swarms will prefer them to foundation.

4. Yes, you will do well to get swarms at a dollar each, and if your neighbor gets so little honey he may do well to sell swarms at that price. From what you say about him he probably does not read many bee-books and bee-papers.

Introducing Queens—Keeping Queens—Other Questions.

1. Can I introduce an Italian queen in the same cage in which she is mailed to me by placing the cage on top of the brood-frames for 2 days, and then set her free among the bees? and should the old queen be removed at the time the new queen is placed on top of the frames in the cage?

2. If you wanted to keep a queen for 10 days or 2 weeks, and didn't need her in the hive, where would you keep her, and how would you feed her?

3. My bees are bringing in pollen, and not a flower in bloom, and a few days ago we had a hard freeze. Where do they get it?

4. I have 3 colonies in 8-frame hives; had 12 last fall, but 9 died because of worms and starvation. Could I have prevented this by feeding them on sugar and water, and if a little honey is added wouldn't it keep the sugar from granulating in the combs?

5. To make the 3 extra strong, how would it do to place a second hive-body under them, with full sheets of foundation, to give the queen extra room, and, when the honey season opens, give them all the bees and the best of the brood and use the comb for swarming? I have no extra comb.

6. Swarming begins here April 15; according to that, when does the bee season open, and when should I put on supers?

7. Should I introduce Italian queens before or after the swarming season?

8. Last summer, I had 12 colonies in boxes, they gave 12 swarms, which I put in hives; 9 of these died in the fall, and only one box-hive colony died. I robbed the box-hives, so I have 11 box-hives and 3 frame hives. What made the box-hive colonies do so much better?

9. Are bees from an Italian queen mated with a black drone any better than the regular black bees, and is their color yellow?

10. Do you think I could do better business running for chunk honey in shallow frames, than for section honey?

11. How many colonies of bees did you have last summer, and how much honey did they produce? Did you have a good honey season?

GEORGIA.

ANSWERS.—1. Nowadays all queens are mailed in introducing cages provisioned with candy which the bees eat out, thus releasing the queen, but generally they are so arranged that the candy is not accessible to the bees of the hive till the bee-keeper uncovers it. It will be all right to leave the queen as you say for 2 days; then remove the old queen and at the same time uncover the candy so the bees may release the queen. That is safer than for you to let the queen out of the cage yourself.

2. Put her in a cage provisioned with candy, put the cage on top of the frames of any strong colony, or else in the house where it is warm.

3. I don't know.

4. Yes, to both questions. But feeding will not keep out the worms. Do that by keeping the colonies strong, and introducing Italian blood.

5. Excellent plan, provided the colonies are strong enough in the first place to fill more than the one story, which they may well be.

6. You cannot gauge the time of putting on supers by the time of swarming. It differs in different places, and also in the same place in different years. Find out as nearly as you can when the flowers first open that give you your harvest, and give supers at that first opening. Or you can go by the old rule to put on supers when you first see bits of white wax along the top-bars and upper part of the combs.

7. Either or during swarming.

8. The old combs are better for wintering than new ones, having the old cocoons in the cells to make them warmer. Besides, the new colonies had to use part of their honey in building out their combs, and the old ones were spared this expense. Possibly the size or shape of the hives may have had a little to do with it. A movable frame hive is much more convenient for a bee-keeper than the old-fashioned straw hive, but the latter is better for the bees.

They may be as good workers as pure Italians, and they vary in color from pure black in appearance to pure Italian. But the after generations of hybrids do not hold out in quality like the first cross.

10. Very likely. At least some of the leading beekeepers in your State think so.

11. I didn't spend the summer in getting honey, but fighting European foul brood. Besides, the season was a failure. I started with 155 colonies, increased—I mean decreased—to 122, and got less than 1,000 pounds of late honey.

Feeding Bees—Introducing Queens—Laying Workers—Shading Hives—Ventilating Hives—Sweet Clover.

1. Will 2 pints of granulated sugar and 1 pint of water make 3 pounds of stores? If not, how much would it be in weight, that is, after the bees cap it over?

2. Please explain the Abbott plan of introducing queens.

3. What is the Sibbald quick method of introducing queens? Mr. J. L. Byer speaks of it in the June number of the American Bee Journal, but I have lost that number.

4. What is your way of introducing queens Please explain the plan.

4. What is your way of introducing queens when you get them by mail?

5. What is the best way of getting rid of laying workers, and not destroy the colony?

6. Do you keep your hives in the shade in summer? I see some advise no shade. Which is best?

7. Are the long-tongued, red clover Italians as yellow as the goldens?

8. What are the exact measurements of a 10-frame hive, inside measure?

9. I see you advocate slipping the supers back to give more air. What would you do to keep the rain out between the hive and super, for there is bound to be a gap?

10. I am thinking of sowing about an acre of sweet clover on wheat early in the spring. Do you think it will work all right? I will let it stand a year or so for the bees, and then put it in alfalfa.

11. Did you ever try, or see used, the Tri-State hive? If so, what do you think about it for a beginner to adopt? I have trouble with the dovetail pulling loose at the corners.

MISSOURI.

ANSWER:—1. If the 2 pints weigh 2 pounds, it ought to be about 2¾ pounds when sealed.

2. Put the new queen in the hive in a provisioned cage with the candy protected so the bees of the hive cannot get at it. In about 2 days remove the old queen and give the bees access to the candy so they may liberate the queen.

3. Hunt the queen out that is to be removed and put her in a wire cage on top of the frames. Then the queen that is to be introduced is laid on top of the same frames, too, and left till evening. Now remove the old queen, and put the new queen in the cage from which the old queen has just been taken, and over the end of the opening fasten a piece of comb foundation. Place on the frames again, after punching a few small holes with a pin through the foundation and release the queen. Sometimes Mr. Sibbald rubs the dead body of the old queen, that has just been killed, over the outside of the cage she has just come out of.

4. Not always the same, something depending on the value of the queen. I may use something like the Abbott plan, putting the new queen at the entrance if the weather is warm enough, and not removing the old queen for about 3 days. If I want to be entirely sure of safe introduction, I put some frames of hatching brood into a hive, not a bee with them, put in the queen, and set the hive on top of a strong colony, with wirecloth between the hives so that the heat can ascend from below, the whole being closed bee-tight. In 5 days I allow the upper hive an entrance large enough for one or two bees at a time, and as soon as I think enough bees are present I set the hive on a stand of its own.

5. Give them a virgin queen just hatched, and a frame of eggs and young brood at the same time. Generally break up the colony.

6. I like hives in the shade of trees, chiefly for my own comfort.

7. I don't know that there is any definite variety called red-clover Italians. At different times bee-keepers have had bees that did unusually well on red clover, and some of them may be darker in color than others.

8. Unfortunately there are no "exact measurements" that all makers have always used in making hives to take 10 frames of Langstroth size. The depth of the frame being 9⅛ inches, if ¼ inch be added to that to make a bee-space, we would have 9⅜ for the depth of the hive. But a very little shrinkage would make bad work, and to make sure against that the hive is made 9½ inches deep. The length of the frame is 17⅝, and if ¼ inch be added at each end we would have 18⅛ for the length of the hive. But that makes very close work, and bees are not much inclined to build at the ends of the hive, so the length is not less than 18¼. For an 8-frame hive I think there is general agreement on 12⅛ for the width. That allows 11 inches for the 8 frames spaced 1⅜, and 1⅛ inches for a dummy ⅜ thick with a space each side of it. If we add twice 1⅜, or 2¾ inches, for 2 additional frames, we would have 14⅞ for the width of a 10-frame hive. But for some reason, that never seemed satisfactory to me, the dummy is generally omitted in 10-frame hives, and they are made 14¼ inches wide. So I think we may say, as nearly as we can come to standard, that the inside measurements of the 10-frame hive are 18¼x12⅛x9½. As a side remark, I may say that I think some of the hives are not more than 9⅜ deep, although I think they were 9½ when new.

9. Nothing. I never knew any harm to come from rain entering the gap.

10. Yes; sweet clover will work right almost any way, provided the ground is not so soft that the plants will heave in winter.

11. I have never seen the Tri-State used. It must be that you do not nail your dovetailed hives. They were never meant to be used without nailing, and when nailed they are the strongest made.

Ventilating Hives

1. When buying swarms of different parties, I took a 10-frame body filled with full sheets of foundation, and told them to put a piece of section under the cover and shade the hive, yet about ⅓ say they won't stay hived. I am afraid if I put in one or two drawn combs, I may get some foul brood. The entrance is ⅞-inch by the width of the hive. What can I do? PENNSYLVANIA.

ANSWER.—The piece of section raises the cover ⅛ of an inch only at one spot. That does not give ventilation enough. Instead of putting anything under the cover, shove it forward so as to leave an inch or more of the top of the hive uncovered at the back end. Also give abundant ventilation at the bottom.

No Queen-Cells—Shade for Bees—East Florida as a Bee-Location

1. I am a beginner in bee-keeping. Last summer I had 9 colonies of bees, 5 were new swarms and 4 were transferred from box-hives. The 4 that were transferred in July starved in January, and in examining the combs I did not find a single queen-cell in either hive. Should there have been a queen-cell, one or more in each hive?

2. On page 95 it leaves the impression that bees need no shade. My bees, when left in the hot sunshine, loaf on the outside of the hive. Do you know of a remedy for this loafing? and do you think that in this part of the State bees should be shaded some?

3. Do you think the east coast of Florida is a good location for bees? I have never read anthing in the American Bee Journal about that State. I am thinking of locating there, is the reason I ask. ILLINOIS.

ANSWERS.—1. No, a queen-cell would have been of no advantage.

2. On page 95, to which you refer, the answer was given at the Wisconsin convention; "What do you want shade for? If you must have shade, use shade-boards only. Too much shade makes the bees cross and slow

to go to work. Sunshine not only makes better workers, but better honey." I don't know who gave that answer, but it sounds as if it had been given on the spur of the moment, without time for thought. No answer is given to the question, "What do you want shade for?" but what comes after seems to take it for granted that it is wanted for the bees. Many bee-keepers, myself among the number, want shade for the bee-keeper rather than for the bees, in which case a shade-board does no good whatever. I want the shade for my own comfort when sitting beside a hive, and for that purpose it is hard to have anything better than a deciduous tree, which allows the sun to shine upon the hive early in the year, but not during hot weather Localities differ. There are places where it is better for the bees to stand out in the open; and in some places they need the shade. What is best for a Wisconsin bee-keeper may not be best down South. In your locality I should like hives under trees.

3. I don't know, but I think good locations may be found there.

Repairing Broken Comb, Etc.

1. We have a lot of comb in frames, some of it is broken and looks rough. Will the bees patch this up? It is my intention to give this comb to the first new swarm.

2. Some of this comb has a lot of some liquid substance that looks dark, and glistens. The cells are partly filled with this stuff. Will the bees be able to clean this out, or can I remove it before placing it in the hives? IOWA.

ANSWERS.—1. Bees are marvelously good repairers. No matter how much the cells may be broken down, if the midrib or middle wall still remains, the bees will soon put all to rights. If the midrib be entirely gone at any part, the bees will restore it, but there is danger that any holes thus filled will be filled with drone-cells. You may, however, avoid this by fitting into the vacancies pieces of worker-comb, tying them in if necessary, and the bees will fasten them together nicely.

2. Likely it is only pollen and honey, and the bees can take care of it.

Cleaning Out Hives Where Bees Died

What is the best method of using up the honey of about 20 colonies of bees that died last winter? It is all honey-dew and dark honey, and only fit for bee-feed. It is in 8-frame dovetail hives, and they are about half full; and some of it is quite damp. I cleaned out most of the dead bees and stored them in the cellar, but I am afraid they will get moldy if left in there very long. I lost 20 colonies out of 45, and think it was on account of the honey-dew. If I would set them out, putting 3 or 4 hives in a pile, and leaving a small entrance for the bees to clean them out, would it cause the stronger colonies to try to rob the weaker? If I did that way would you put them out now? And would you put them all out at the same time? IOWA.

ANSWER.—The only object in leaving a small entrance is to keep the bees from tearing the combs when the combs are few compared with the number of bees to work at them. In the present case the combs are so many that such care need not be taken. Moreover, brood-combs of some age are not likely to be torn. So you should set the whole out, fully exposed to the bees, preferably a few rods distant, and in 2 or 3 days the job will be done. It ought to cause no robbing if you do nothing foolish in the way of opening up hives while the work is going on.

Strengthening Weak Colonies—Golden Queens—Getting Increase

1. I found a colony yesterday which, from spring dwindling, had gone to only a few handfuls of bees and a queen. As it is warm weather here with many wild flowers in bloom, and the bees carrying in any amount of pollen from the maples, I proceeded as follows, and want to see what you think of the plan:

I went to a strong colony, taking a frame covered with about 10 square inches of brood, and brushed the bees off so as not to get the queen, and placed it in a weak colony. Then I moved the strong colony about 6 feet distant from its former stand, and set the weak one in its place. Since it has a queen and weighs about 50 pounds with the honey, and has been strengthened with that brood and the field-force of the other colony, do you think it will come through? Will that usually work?

2. Did you ever use any golden queens? Do you think that there is anything to the story of their being poor winterers in this State?

3. What do you think of the plan of increase by giving a queen and 2 frames of brood to a colony and setting it on the stand of a colony, as I proceeded above? What plan of increase do you advise? ILLINOIS.

ANSWERS.—1. Usually the plan will work, but there is danger that the queen of the weak colony will be killed. It is safer to brush some bees on the ground a little distance in front of the weak colony, so that the older bees will fly back home and the young ones crawl into the hive of the weakling. If only a few are added in this way, the queen will not be endangered. Then the the next day more can be added, and for several days if desired. Each day the danger will be less from larger numbers being added, as there is a larger number in the hive to defend the queen. Or, after a few have been added in this way, a frame of advanced brood with adhering bees may be added.

2. Yes, I've had such queens. There may be good and there may be poor wintering among them.

3. As you may have guessed from the first answer, I don't like the plan. The best plan depends upon circumstances. For some it may be natural swarming, for some the nucleus plan, etc. Study up the whole matter carefully, and then decide which will fit you best.

Bee-Trap — Swarming — Transferring — Clipping Queens

1. Do you advise the use of a queen-and-drone trap?

2. How soon would you put on the trap again after swarming the first time in the spring?

3. How often would you allow a colony of bees to swarm in one season?

4. When would you advise transferring bees into new hives from old boxes to get the best results?

5. When would you advise clipping a queen's wings? ILLINOIS.

ANSWERS.—1. It is desirable in a case where a swarm is expected to issue with no one on the watch. It merely holds the queen until the bee-keeper can deal with the case. It is also useful in some cases to catch undesirable drones. But many bee-keepers find no use for one.

2. Generally there is no need of a trap for the queen at all, after swarming. But if it be needed to catch drones, don't have it on a hive with a virgin queen until perhaps 10 days after her birth.

3. That depends. If honey and no increase is desired, then it's better to have no swarming at all, *if* you can prevent it. If you care for increase alone, then bees will hardly swarm too much. Generally, where some increase is desired honey is also desired, in which case it is better not to have more than one swarm from each colony.

4. Wait till the bees swarm, hive the swarm in a good hive, and transfer 21 days later.

5. Clip any time convenient as soon as bees are gathering, and after that clip each queen as soon as convenient after she has begun to lay.

Too Early Dividing for Increase

In Farm Journal, in the column for bee-keepers, appears the following paragraph: "April 15th is a good time to divide colonies for increase; and if only a few colonies are split up for increase, one can make increase and secure a surplus at the same time."

Would not a few words of caution in the April American Bee Journal, in your Question-Box, help to carry some innocent bee-keepers through April and most, if not all, of May, without thus spoiling good colonies? SUBSCRIBER.

ANSWER.—Something depends upon the interpretation put upon the last clause of the sentence quoted. Some may understand it to mean that in an apiary of say 50 colonies, 5 or 10 may be divided April 15, leaving the remaining 40 or 45 for surplus; and thus there would be an increase of 5, 10, or more, and a good surplus from the 40 or 45 not divided. Likely, however, a larger number will understand it to mean something like this: If you have only a few colonies, and want to increase and at the same time get a reasonable crop of honey, you can easily do so by dividing your colonies April 15th, for by dividing thus early each part will have plenty of time to build up good and strong for the harvest.

Again something depends. In the South, in localities where bees swarm naturally April 15th, conditions are different from what they are in the North, where natural swarms do not occur till in June. Most of those who read the Farm Journal likely live in the North, and it requires no argument to show that in the North a colony divided April 15th will have a longer time to build up for the harvest than if divided June 1st. That has a very attractive look to the beginner, who says to himself, "If I wait to let the bees swarm naturally, that will seldom be as early as the first of June, and the time to build up for the harvest will be very short, for clover will be yielding perhaps by June 10th. If I divide April 15th, the time for building up will be so much longer that there will be a great gain. But why not give still longer time to build up, and thus get a rousing crop. Glad I thought of it. March 15th for me."

But if he divides in March, he will find that something more than time is needed. If he divides 5 colonies, expecting to have 10 strong for the harvest, he is more likely to find that part of them have died, and none of the rest is very strong. Early in the season a weakling is not likely to build up *at all*. On the contrary, it remains stationary or becomes still weaker, showing no increase until the weather becomes warmer, while a colony of considerable strength can keep up heat enough in the hive to increase right along even through some very cold days.

Another thing is the matter of queens. In the North a queen reared much before about June 10th, is not likely to be of the best character, if indeed she does not disappear before she gets to laying.

It can hardly be said with too much emphasis, that the average attempt to divide early in the North, with the idea of increasing the honey crop, can only end in dismal failure.

Winter Work in the Apiary

You may suppose that there is nothing to be done in the apiary during this cold weather. So I thought, but passing through my bee-yard this morning I happened to notice that the entrance to one hive was almost closed with dead bees. I at once went to each colony, and with a small switch pulled out the dead bees in much greater numbers than I expected, so early in the winter.

This is a good time to repair empty hives and to paint them nicely, using a little putty to fill cracks and nail-holes. I have my hives all painted in two colors—the brood-chambers red, the supers white. This plan, to my eye, gives a more attractive appearance to the apiary. Were I skillful in free-hand drawing, I would paint flowers on each super. This certainly would add much to appearances, and when nectar failed in the field, might help to pull the little bees through until another flow!

If you are handy with tools, make a few extra hives, and surely some extra supers.

These are easily made, and we ought to have at least 2 supers to each brood-chamber. Some bee-men have 3 and 4, and tier up when needed. In the December American Bee Journal is an account of two bee-men, one of whom had but one super to each colony, and as soon as this was full, not waiting for capping and ripening, he extracted; it was so easy to throw the honey out when not capped. This man attempted to ripen the honey himself, but failed, and lost heavily as he could not sell the thin stuff. The other man had extra supers, tiered up, gave the bees time to cap and ripen the honey, and he secured fine honey and sold at a fancy price.

Make your hives and supers now, and be ready for the great white clover flow which is predicted for 1910.—T. M. BARTON, in *Farmers' Home Journal*.

Noble Old Banner.

While I take two other bee-papers, and have several books treating on bees, I could not do without the American Bee Journal. Noble old Banner, O long may she wave!

H. E. GALYEAN.

Rt. 1, Carsonville, Va.

Reports and Experiences

Bees Doing Well

I must say I like the American Bee Journal very much. I put out my bees on March 18th, and they are doing well. Two colonies died out of 10. AUG. KUEHN.
Waukon, Iowa, March 28

Expecting a Good Season

Bees are 25 days earlier than any previous year I can remember. They have wintered well, as far as I can hear. We are looking forward to a good season.
Lansing, Mich., April 1. A. D. D. WOOD.

Brighter Prospects in California

We had two inches of rain here last week, so the prospects for a honey crop are much brighter than when my friend Mendleson wrote, on Feb. 21st. All reports say that the bees have wintered well, and are in first-class condition.
Ventura, Cal., March 29. D. J. KENNEDY.

Heavy Winter Loss of Bees

There has been a great loss in the number of colonies of bees in Southwestern Ohio this winter, fully 50 percent being dead; and more weak colonies than I have ever seen before. That means slow breeding up for the white clover flow, which is our main honey-producing plant. At this date white clover looks good. The cause of the great winter loss was honey-dew, and a shortage of winter stores. J. G. CREIGHTON.
Harrison, Ohio, March 31.

Good Honey Crop Expected

The past season was very unfavorable to honey-producers in this State, many bee-keepers failing to secure any surplus whatever. Fortunately we succeeded in getting a fair crop, due in no small degree to the helpful teachings of the American Bee Journal and other publications. The spring has been an unusually late one, but the turning point has been reached, and colonies are rapidly becoming populous. Indications are favorable for a good honey crop.
Ft. Smith, Ark., March 28. LEE KERR.

Prospects for Good Honey Season

We are having one of the earliest springs on record. March began with warm weather, and has continued warm throughout the whole month. I put out my bees the 24th; they came out strong, and began at once to carry pollen from soft maple and elm. I have about 50 colonies. Prospects are for a good honey season. We had a very poor crop of honey here last year. There was not enough honey to supply the demand of the local dealers. WM. EHLERT.
Vesper, Wis., March 28.

Questions of the Season

We are having a wonderful spell of weather. Since March 15th, 10 days ago, the weather has not only been spring-like, it has been summer-like. My bees are having such a time as may be experienced by bees in this locality at this season of the year only once in many years. I placed the bees in the cellar (a few over 100 colonies) about Nov. 15th, and took them out March 17th, in almost perfect condition. The question is not one of feeding, but of taking away honey to give the queens room to lay. Some of this honey will be needed later on, no doubt; but I am well satisfied it would be a mistake to leave it all in the hives now.

As early as last Sunday March 20 the soft maples along the Wisconsin river were out in full bloom, and the bees roaring on them. In fact, there has not been a day since the bees were removed from the cellar that the bees could not work all day. Elms are now out, and no telling what amount of bloom and pollen is accessible. As soon as I had the hives on the summer stands, I made them warm and snug on top by wrapping with tarred roofing-paper. For this purpose I procure a grade of roofing-paper at a cost of 64 cents per roll of 100 feet. This is better material for wrapping hives than the ordinary tarred paper, and costs less.

Now these questions confront us: How long will this New Mexico weather continue? If winter weather comes on again, as it is quite possible that it should here in Wisconsin, what will be the result in colonies of bees that have been getting pollen as they have here, and undoubtedly have started as much brood as they possibly could? It might have been much better to have prevented such early breeding; but how could it have been done? The conditions for taking bees out of winter quarters were ideal, and while they have been contented up to that time, not one bee-keeper in a hundred would have wished to keep them confined any longer.

I wonder what Dr. Miller is thinking about this situation? It may come out all right—all depends upon weather conditions; but it will certainly be hard on bees and fruit if after having a period of such weather as we have now, there should ensue a period of hard freezing weather. Fruit is safe for a time, as no trees are in blossom yet, but if the weather continues long as it is now, everything will come out. I think in such a case the bees would stand the best chance. Colonies that are very strong can probably protect their brood, all except newly-laid eggs in the outer circle. The loss of these eggs would be no detriment. Weak colonies could be set over strong ones with a queen-excluder between, as advised by Mr. Alexander for the treatment of weak colonies in spring.

Aside from the weather conditions, which are phenomenal, prospects for a honey crop in the North and Central West are good. This brings in the question: What will be the effect on present honey prices of a good crop this year? Let us hear from others on these questions that are of interest to each and all. HARRY LATHROP.
Bridgeport, Wis., March 25.

Bees Wintered Well

The weather is so fine that I have taken my bees out of the cellar. Splendid wintering—14 colonies out of 17. The 3 dead were nuclei that were weak. Bees were in cellar 4 months. Two colonies of "driven" bees, secured from a neighbor in November, wintered almost wholly on sugar syrup. They each had a comb of honey from another hive, but took the syrup and left the honey. Five strong colonies, bought in Iowa and shipped by freight, were put into the cellar without flight the day they arrived, and have come through nicely. The next few weeks will be trying, as we have considerable wind. There was a heavy snow on the ground all winter. EDWIN EWELL.
Waseca, Minn., March 23.

Working Bees for Best Results

In the Report of the National convention held at Sioux City, Iowa, I notice a paper furnished by Mr. A. C. Allen, who gives the plan I have followed in most particulars for many years, and as I have had good success I intend to continue the plan.

I notice in a bee-paper last season that almost every one heard from in giving their experience in preparing bees for wintering, advised doing all feeding in the fall so as not to have to do any spring feeding. Fall feeding is all right so far as it goes, for the bees should have plenty to live on, but it makes no difference with me how much stores the bees may have, I feed in the spring, anyway. Of course, one should feed at any time the bees may be short of stores, if found so—at any time during winter or early spring—so as to bring them through until fruit-bloom; as soon as that is over, in order to keep up brood-rearing started during the blooming period, I then feed about every other day, according as needed to keep the bees stimulated to brood-rearing, so as to have them rear lots of young bees; and I try to have them ready with a large lot of bees by the time the white clover comes in bloom, which is about June 20th with me, then I get them to work storing in the supers, and I seldom ever have any swarms at all; and, if any, they are rousing good ones.

After the white clover is past, or about over, I divide, if I wish increase. I work my bees mostly for extracted honey, although I have worked some for section honey also on this plan. One cannot control swarming quite so well with section honey as for extracted, but with careful manipulation one may succeed even with section honey. I use the 10-frame hive exclusively. I am sure I could not be so successful in securing any kind of honey with a hive less than the 10 frame, as I want rousing colonies when I expect surplus honey, or even large swarms.

I have followed this plan for many years with good success. What I have done others may do. But I have not then been as successful as the report that Dr. Miller gives, or Mr. Doolittle. I think I do not give my bees as close attention as either of these leading bee-keepers, as I am much occupied with other business during the very time the bees need the most attention; but I try to give them as good as I can, not to neglect my other business, although I have never gone through a season yet but what I thought my success could have been much improved with more attention.

If you will remember, Mr. York, I gave my experience once in the Progressive Bee-Keeper, some years ago, stating that I had secured 200 pounds of honey per colony; but when my bees were at their very best on Spanish-needle, it turned so very dry and hot all at once that the nectar ceased very suddenly. If it had continued in bloom as it usually does for a longer period, I am sure my average would have been much better. You said in commenting upon my experience at the time that you would "like to know how much I was expecting." I have taken 200 pounds in three different seasons with my plan, and while my success has been much over the average, I have never thought that I did so very much, nor near the possibilities. This only shows that with good care, bees, or in fact any business, may be a success—at least very much better than the average. J. W. ROUSE.
Mexico, Mo.

[Mr. Allen's plan was given on page 93, last month.—EDITOR.]

Bee-Keeping in Ontario

My bees wintered tip-top, only losing one out of 24 colonies, and that through putting on taffy not made hard enough, and it melted and smothered them. Never have my bees come through a winter in better shape, both in strength and stores.

The past season was the best, for both early and late flowers of honey, we have ha for a long time in this section; no honey-dew of any sort, and bees went into winter quarters in first-class shape.

I winter my bees on the summer stands in chaff hives. They had no chance for flight this winter from the middle of November until the 6th of this month. We had a nice, steady winter with but three or four cold dips below zero, and then only for a day or two at a time. TOM COOLEY.
Sheffield, Ont., Can., March 22.

Some Weather Prophecies

I have been quite amused to notice in the bee-papers about shaking energy into the bees, by prominent bee-men. It reminds me very forcibly of an old saying, which has been handed down through our ancestors from Switzerland to the present generation, and which is as follows:

First, when the bear comes out from his den of long sleep or hibernating, and sees his own shadow on Feb. 2d, or Candlemas Day, bruno will go back and remain in his den 4 weeks, if not 6 weeks.

Second, in the month of February the lion does not shake his head; then he switches his tail.

Third, if Mathias, on the 24th of the second month of the year, finds ice he will break it; if not, he will make it.

First, to understand that prophecy of our ancestors, may be accomplished as follows: Those mountaineers of Switzerland were thoroughly acquainted with the nature of bruno's winter quarters. Somewhere in the 70's, I had the privilege of taking a night's lodging on Candlemas Day with J. L. Byer, of Mt. Joy, Ont., who owned a large bear. The following morning, the bear being burrowed in straw in the barn, made his appearance fastened to the barn-post with 15 or more feet of chain. The writer witnessed his action at the door of the barn, looking and sniffing for a few moments and then went back into the den again, it being very cold, as it was below zero, and we had our overcoats on to keep warm. As the sun was shining all day, the owner said that the bear would make his appearance again in 4 weeks.

Fifty years ago I had the privilege on Candlemas Day, it being cloudy, drizzling and summerlike, of taking a gun and going squirreling. The coon, chipmunk or ground squirrel, and the like, were ransacking the bush, appearing like vernal life again. As chance would have it, myself and 4 other men with seine or draw-net on Candlemas Day, in '67 or '68, it being a very mild winter up to Feb. 2d, had done some fishing, it being a fine, warm day, and no ice on the fishing "ground," we fished a lot, of all kinds of fish with the draw seine, simply showing that one extreme can be followed by another.

Second, the lion has his play to perform as well as the bear, in as much as the sun enters constellation Capricorn, which places our earthship in constellation Leo or Lion on the meridian at midnight. Now, the lion being at home in a warm climate does not shake his head the first half of the winter, and it not being cold and stormy will switch his tail in the last half of the winter, representing the cat when mousing, the nearer the mouse will approach the more anxiety the lion will show as well.

Third, February 24th, called Mathias Day, the writer observed more than once that the winter Boreas didn't form much ice, and the February thaw made its appearance, and made it like spring weather. The white mantle was laid aside, both on land and water, so the ice-men lamented of having ice stored away. Mathias with Boreas in company showed their power; March 20th there were 10 or 12 inches of ice in inlet waters in shape for the ice-men to store up.

The bumble-bee and honey-bee give good forecast of the future weather. Last November there had been a pleasant squaw winter of 14 days duration, and the last 3 days of that month the honey-bees carried in pollen and some honey like dew. They have not had a cleansing flight since, but seem to do fine so far, most of the time being nearly covered with snow. The bumble-bee in wet summer weather has the nest made in sheltered places, and in hot summer weather in the ground to escape the summer heat.

In summing up the three prophecies, the whole creation is so interlinked that the wise observer can understand the financial welfare of the future, whether prosperity is in store or not. J. M. WISMER.
Jordan Station, Ontario.

Wants and Exchanges.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

Eggs for Hatching.—Single Comb White Leghorns. Send for prices.
3A3t SAMUEL RAPP, Morton, Ill.

Golden Wyandots. Best and most beautiful chicken on earth. Stock and eggs for sale. J. R. DOUGLAS, Mound City, Kan. 3A3

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Our Book Notices.

By LEWIS EDWIN YORK,

Supt. Public Schools,
MARTINS FERRY, Belmont Co., OHIO.

British Poets of the Nineteenth Century.—By Curtis Hidden Page. Chicago: Benjamin H. Sanborn & Company. Cloth. 935 pages. Price, $2.00.

Professor Page, of Columbia University, has selected and arranged the choicest poems of 15 British authors from Wordsworth to Swinburne, and the publishers have made a most delightful book that should have a place in every well-selected library. Most people do not read enough of poetry. Yet the habit is easily acquired. The results are astonishing. One's ideals are elevated. He inhales the ozone of a higher region. He finds uplift, inspiration, new energy for the common tasks of life.

Civics and Health.—By William H. Allen, Secretary of the Bureau of Municipal Research. Introduction by William T. Sedgwick. Illustrated. Chicago: Ginn & Company. Cloth. 410 pages. Price, $1.25.

It is only within very recent years that we have come into possession of tested knowledge relative to health, sanitation, public hygiene, etc. The book at hand deals with this vital subject in a truly popular yet scientific way. Doubtless it will be the means of saving thousands of lives and of enhancing the physical welfare of multitudes. The chapter on "The Patent Medicine Evil" is worth many times the price of the book. A knowledge of health science is absolutely essential to the maintenance of abundant bodily health and strength. Get and read this book.

Primer of Sanitation.—By John W. Ritchie. Yonkers, N. Y.: World Book Company. Illustrated. Cloth. 200 pages. Price, $1.50.

Newspapers and magazines are full of the subject of individual and public health. Rockefeller has given a million dollars to fight the hookworm, and President Taft has recommended the establishment of a public health bureau that shall be national. The average parent will find in this Primer just what is needed for a clear understanding of all the diseases that are common, such as measles, tonsillitis, scarlet fever, grippe, colds, etc.

Alexander Hamilton.—By F. S. Oliver. New York: G. P. Putnam's Sons. Cloth. 474 pages. Price, $1.25, for students' edition.

Every careful reader likes to have a half-dozen or more of the best of essays in his library. Here is a little volume with subtitle: An Essay on American Union. Its every page sparkles with the best output of a master English literary artist. The rise of political parties, the conflict of contending forces, the personal character of the leaders are all given in clear relief and admirable setting. No one can read this book without increasing his culture and getting a clear notion of the principles that governed the makers of our nation.

The Northwest Under Three Flags.—By Charles Moore. New York: Harper & Brothers. Illustrated. Cloth. 400 pages. Price, $2.50.

The lover of history will find in this book, with its excellent map and pictures, the very thing to interest and inspire. The French, English and American flags have floated in succession over the Northwest. Out of this territory have been carved many States that are taking the lead in American affairs. In 10 absorbing chapters the author unfolds the story of the successive changes. To read the story of our country, and to know the heroism that was shown by our fathers in the winning of freedom mean the awakening of the best within us. We all need to learn the lessons of patriotism, protection and service, and this can be done best through the pages of history when the stories are told by men who have learned to see.

John Marvel, Assistant. By Thomas Nelson Page. New York: Charles Scribner's Sons. Cloth. 573 pages. Price, $1.50.

This is a marvelous book in many respects. It delineates in a most fascinating manner at least three very strong characters, of which John Marvel, the assistant rector of a wealthy Episcopal church, is the principal. While at times the language of certain characters in the book is anything but chaste, still, when the reader remembers the class of people described, he can overlook those expressions. All in all, it is a strong book, and ought to help arouse a deeper interest in the poorer classes, and their conditions. It will repay a careful reading.

Our Clubbing List.

We have arranged with some of the best magazines and other publications to offer them in connection with a year's subscription to the American Bee Journal. If there are any others that you would like to subscribe for, be sure to let us know what they are, and we will quote you price. Our list so far as made up is as follows, the prices applying only to the United States, outside of Chicago:

American Bee Journal one year (75 cts.)		Both
With American Agriculturist	$1.00	$1.75
" Bee-Keepers' Review (new)	1.00	1.85
" American Poultry World	.50	1.40
" American Sheep Breeder	1.00	1.85
" Better Fruit	1.00	1.75
" Breeders' Gazette	1.75	2.45
" Canadian Bee Journal	1.00	1.85
" Century Magazine	4.00	4.75
" Circle Magazine, The	1.50	2.25
" Commoner, The	1.00	1.75
" Country Life in America	4.00	4.75
" Delineator, The	1.00	1.85
" Designer, The	50	1.40
" Dressmaking at Home	1.00	1.85
" Etude, The (musical)	1.50	2.25
" Everyday Housekeeping	.50	1.40
" Everybody's Magazine	1.50	2.25
" Garden Magazine	1.00	1.85
" Gleanings in Bee Culture	1.00	1.75
" Good Housekeeping	1.00	1.75
" Guide to Nature, The	1.00	1.85
" Harper's Weekly	4.00	4.75
" House Beautiful, The	2.50	3.25
" Housekeeper, The	.75	1.50
" Human Life	1.00	1.75
" Ladies' Home Journal	1.50	2.25
" Little Folks	1.00	1.85
" Market Growers' Journal	1.00	1.75
" McCall's Magazine	.50	1.40
" McClure's Magazine	1.50	2.25
" Modern Priscilla	.75	1.60
" Mothers' Magazine	.50	1.40
" Munsey's Magazine	1.00	1.85
" Nat'l Stockman & Farmer	1.00	1.85
" New Idea Woman's Magazine	.50	1.40
" Ohio Farmer	.75	1.60
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" Success Magazine	1.00	1.85
" Sunday-School Times	1.00	1.85
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" World's Work	3.00	3.75
" World Today, The	1.50	2.25
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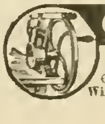

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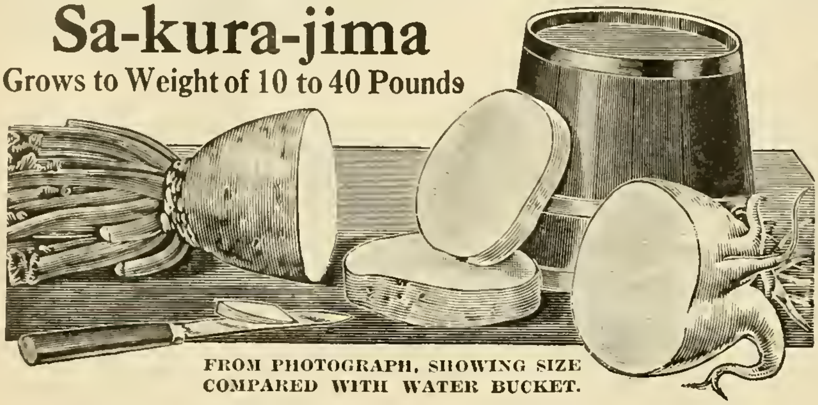

FROM PHOTOGRAPH, SHOWING SIZE COMPARED WITH WATER BUCKET.

Has Been Grown 1½ feet Long and 10 in. Diameter

This Giant Radish is a distinct novelty, in fact the greatest novelty of its kind ever introduced in America. The Fruit-Grower could hardly believe the stories told about this wonderful radish, so we sent out seeds for testing to our subscribers last year. We are "from Missouri," but we were certainly "shown" by our readers, for they grew radishes weighing all the way from **10 to 42 pounds.** The story of the growing of these Giants is told in February, our Gardening Number. Sample copies sent on request.

What do you think of a radish which grows to weigh 10 to 42 pounds, which is often a foot and a half long and 10 inches through; which is as tender and sweet during hottest July weather as earliest spring radishes; meat crystal white, solid, texture like a fine apple, and never becomes hot or pithy; which can be eaten raw like an apple, cooked like turnips, and pulled late in the fall, keeps all winter as sweet and crisp as when pulled. The tops, which grow 2 to 3 feet long, cooked as "greens," are to be preferred to spinach and mustard.

This describes the Giant Radish from Japan, "Sakurajima," introduced in America several years ago by the U. S. Dept. of Agriculture, and has proved of great value here. Among the first places tested was at the Long Island Experiment Station, and The Fruit-Grower received a "tip" as to its value from Director Fullerton.

Planted late, it will extend the radish season through the entire summer, being at its best in hottest weather. Seeds planted to mature in late autumn will keep nearly all winter, almost until radishes come again.

Hon. Wm. J. Bryan, hearing we had this seed, wrote: "I saw the giant radish during my tour of Japan and have been intending to send there for seed. The flavor is good. I will buy seeds of you or subscribe for your paper—in fact, you can trade with me on your own terms."

Mr. Bryan is a Fruit-Grower subscriber.

Director Fullerton writes that during 1909 he grew one of these radishes which **weighed forty-two pounds,** and that he expects during the present season to break all records by growing one which will weigh 50 lbs. Read his article in The Fruit-Grower.

SEEDS FREE with a Trial Subscription to The Fruit-Grower

Appreciating the great value of this new radish, The Fruit-Grower has purchased practically **all of the seeds of this variety in the United States** to be distributed **Free** to new subscribers. We canvassed the entire country, and it would not be possible to secure more seeds, even from Japan.

The seed is not for sale at any price, but we will mail a trial packet free to every one who sends 50c, coin or stamps, for a year's trial subscription to The Fruit-Grower. Regular rate $1.00, but we offer it to you at half price, to get you interested, and convince you that we have the best paper of the kind in existence.

Send for a free copy of February, annual Gardening issue, handsomely illustrated, 84 pages, and read how our folks grew the big radishes; leading fruit paper of America. Many of our 100,000 readers write that a single number is worth the price of a whole year's subscription. Ask the editor of this paper about The Fruit-Grower. He will recommend it, and he knows that we could not afford to make this offer unless The Fruit-Grower would "make good," and that Sakurajima Radish had been fully tested and all we claim for it. Liberal cash prizes for largest radishes grown. Send 50c at our risk for a year's trial subscription, and seeds will be sent by return mail, **FREE.** Write at once, before supply is exhausted.

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Engravings for Sale.

We are accumulating quite a large stock of bee-yard engravings and other pictures used from time to time in the American Bee Journal. No doubt many of them could be used by bee-keepers in their local newspapers, on their letterheads, on souvenir cards, or in other profitable or interesting ways. If we can sell them it will help us to pay for others that we are constantly having made and using in these columns.

We do not have a catalog or printed list of the engravings, but if you will let us know just which you want we will be pleased to quote you a very low price, postpaid. Just look through the copies of the Bee Journal and make your selection. Then write to us.

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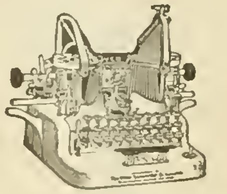

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CHICAGO, - ILLINOIS

Please mention Am. Bee Journal when writing.

Not Cheap Queens, But Queens Cheap

Prices of 3-Band Queens	1	6
Untested Queens	$ .75	$ 4.20
Tested Queens	1.00	5.70
Breeder's Queens	5.00	
Golden or 5-Band Queens	**1**	**6**
Untested Queens	$ 1.00	$ 5.70
Tested Queens	1.50	8.70
Breeders' Queens	10.00	
3-Band Nuclei	**1**	**6**
One-frame, Untested Queen	$ 1.75	$11.20
Two " " "	2.25	13.20
One " Tested "	2.00	11.70
Two " " "	2.50	14.70
5-Band or Golden Nuclei	**1**	**6**
One-frame, Untested Queen	$ 2.00	$11.70
Two " " "	3.00	17.70
One " Tested "	2.50	14.70
Two " " "	3.50	20.70

Reared from the best 3 and 5 Band Red Clover Italian Breeder Queens.

☞ DIRECTIONS FOR BUILDING UP WEAK COLONIES—10 cents.

W. J. Littlefield, Little Rock, Ark.

Please mention Am. Bee Journal when writing.

We have a Car of

! California Extracted Honey !

which we offer at 6¾ cents per pound. Samples on request.

C. C. CLEMONS PROD. CO.

2Atf KANSAS CITY, MO

Please mention Am. Bee Journal when writing.

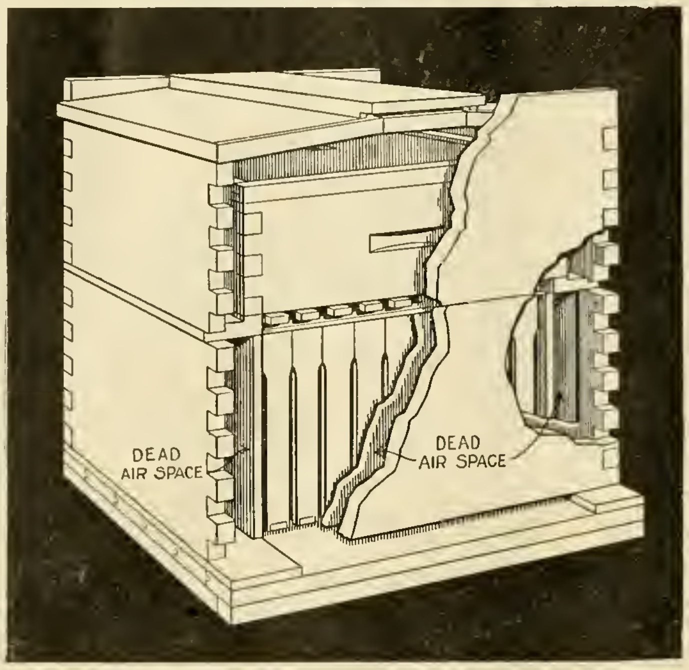
PROTECTION HIVE

All arguments lead to a matter of protection, look where you may. Dead-air-spaces or packing, as you prefer.

The hive that is sold at less than the material in it will cost you at your local lumber-dealers, equally good stock being used.

Send us a list of goods wanted, and let us figure on Dovetail hives sections, foundation, and all bee-keepers' supplies. We will save you money.

Send for Circular.



A. G. WOODMAN CO., GRAND RAPIDS, MICH.

Please mention Am. Bee Journal when writing.

QUEENS

An improved superior strain of Italians is what **Quirin-the-Queen-Breeder** rears.

Our stock is Northern-bred and hardy.

Our five yards Winter on Summer stands with practically no loss.

One of our customers tells us he has become one of the largest honey-producers of the West, and says that in a great measure his success is due to our stock.

Prices before July 1	1	6	12
Select queens	$1 00	$ 5 00	$ 9 00
Tested queens	1 50	8 00	15 00
Select tested queens	2 00	10 00	18 00
Breeders	4 00		
Golden 5-band breeders	6 00		
2-comb nuclei, no queen	2 50	14 00	25 00
3-comb nuclei	3 50	20 00	35 00
Full colonies on 8 frames	6 00	30 00	

Colonies and Nuclei, if shipped before June 1st, add 25 percent to above price; also add the price of whatever grade of queen is wanted with same. Safe arrival guaranteed.

Quirin-the-Queen-Breeder, Bellevue, O.

14¾ Cents a Rod

For 22-in. Hog Fence; 15 3-4c for 26-inch; 18 3-4c for 31-inch; 22c for 34-inch; 25c for a 47-inch Farm Fence. 50-inch Poultry Fence 33c. **Sold on 30 days trial.** 80 rod spool Ideal Barb Wire **$1.55** Catalogue free.

KITSELMAN BROS.,
Box 65 **MUNCIE, IND.**

Please mention Am. Bee Journal when writing.

! For Sale !

10 to 50 pr. ct. Discount

All Hives and Appurtenances of every description.

Large amount still in the flat. New Hives set up, painted, but never used.

About 125 Hives used and unused.

Would make best terms to party buying all the property.

Call Saturdays P. M., or Sundays; or address,

P. W. DUNNE,
165 South Forest Ave.,
3A3t RIVER FOREST, Cook Co., ILL.

Italian Bees, Queens and Nuclei

Choice Home-Bred Imported Stock. All Queens reared in Full Colonies.

Prices for May

1 Untested Queen	$1.10
1 Tested "	1 50
1 Select Tested	1.65
1 Breeder Queen	2.75
1-Comb Nucleus (no queen)	1.15

Safe arrival guaranteed.

For price on larger quantities, and description of each grade of Queens send for Catalog. Send for sample COMB FOUNDATION. 1Atf

J. L. STRONG,
204 E. Logan St., CLARINDA, IOWA.

Caucasians, Carniolans, Banats, Cyprians

Select untested queens, $1 each; 5 for $4. Imported breeding queens, $5 to $6. Send to original importer and get genuine stock **FRANK BENTON, Box 17, Washington, D. C.**

BEES, NUCLEI, and QUEENS

For many years I have been selling bees and queens, and guaranteeing satisfaction in every way. I will be in the business more extensively than ever during the season of 1910. I have mailed queen-bees practically all over the world. My prices the coming season will be as follows, for **Italian**

BEES

Full colonies with Tested Queens, in 8-frame Langstroth hive, $7.00 per col,; in same hive with 10 frames, $7.50. Colonies in lots of 5 or more, 25 cents per colony less.

NUCLEI

One 3-Hoffman-Langstroth-frame Nucleus, $2.50; in lots of 6 or more at $2.25 each; price of queens to be added. Orders for nuclei filled about May 10th to 15th, and thereafter.

QUEENS

Tested Italian, each $1.50; 6 for $7.50; or $13.00 per dozen.

I have 50 choice Italian breeding-queens, either golden or leather-colored, at $2.50 each. "First come first served."

Untested Queens After May 15

Italian (warranted) 75 cents each; 6 for $4.00; or $7.50 per dozen. Carniolan or Caucasian at the same prices.

If you have never had any of my Bees or Queens, you should give them a trial. Satisfaction guaranteed. Address all orders to

ARTHUR STANLEY,
DIXON, LEE CO., ILL.

Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 90c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2Aot

S. F. Trego, Swedona, Ills.

Tennessee-Bred Queens!

**All from Extra-Select Mothers,
Davis' Best, and the
Best Queens Money Can Buy**

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

	November 1st to July 1st			July 1 to Nov. 1				
	1	6	12	1	6	12	Select Breeder -	$4.00
Untested..........	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Nuclei; no queen 1 fr	2.00
Select Untested..	1.25	6.50	12.00	1.00	5.00	9.00	" " " 2 "	3.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00	" " " 3 "	4.00
Select Tested....	2.50	13.50	25.00	2.00	10.00	18 00	Colony, " " 8 "	8 00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,

Dealer in, Importer and Breeder of

ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
Ewell Station on L. & N. R. R.

SPRING HILL, TENN.

Please mention Am. Bee Journal when writing.

HONEY AND BEESWAX

When consigning, buying,
or selling, consult

R. A. BURNETT & CO.

199 South Water St. Chicago, Ill

Please mention Am. Bee Journal when writing.

EXTRACTING MADE EASY

by using

MILLER AUTOMATIC DECAPPERS

$5 to $35. Catalog Free.

APICULTURAL MANUFACTURING CO.,
Providence, R. I. 7Atf

Please mention Am. Bee Journal when writing.

MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.
S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.

ARIZONA—H. W. Ryder, Phœnix.
MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

ROOT'S GOODS

for 1910 are better than ever. We carry full line of them.

MR. BEEMAN, take notice! For low freight and quick service our location cannot be excelled in the State. Don't delay. Order now. You can be saving your honey crop while the tardy fellow is waiting for his goods to arrive.

Our 1910 Bee-Line

is of the best. We are making a specialty of high-grade untested queens from a famous strain of honey-gatherers, at $1.00 each. Order now, and be sure to get one for our delivery after May 15, 1910. Remember that cheap queens and poor blood do not pay.

Rea Bee & Honey Co.,
Reynoldsville, Pa.

Please mention Am. Bee Journal when writing.

Standard-Bred Queens!

Reared from our Superior Golden and 3-banded Italian stock. The cells are all built in very strong colonies. Our Queens produce bees that store from 150 pounds in Colorado to 256 pounds in N. Y. State, with but little swarming. Queens ready April 1st: Untested, $1.25 each; 6 for $6.00; 12 for $10. Tested, $1.50 each; Select Tested, $2.50; Breeders, $5.00.

Full colonies and Nuclei for sale.

Mr. F. M. Jones, of Lockport, N. Y., writes as follows about our Queens and Bees:

LOCKPORT, N. Y., Sept. 9. 1908.

MR. T. S. HALL, Jasper, Ga.

Dear Sir:—Your letter of the 2d received. I have taken only a part of the honey. The bees are gathering honey very fast. The most of the colonies are yellow as gold and very gentle. I think your Italians are very gentle. I bought 2 dozen from another breeder 1st of July. They are not as gentle as yours. You must remember, I had only 45 colonies of bees last spring—7 strong ones and 38 very weak ones that I would have lost if the cold weather had lasted two weeks longer. Some of them did not have bees enough to cover one frame, and yet their crop will be about 3 tons of white honey. I know you would like to know how I increased to 134 colonies. I had 2 of them swarm out, and I made 14 nuclei from them, and put your young queens with them. I had 5 swarms of black bees come to me and go in the empty hives about the 1st of June. After they had been in the hives 3 weeks I divided them into 20 nuclei and killed the black queens and put in 20 of your nice young Italian queens with them. The rest of the colonies I made by taking frames of hatching brood from the old colonies and putting them in empty hives. I could not have made that increase without the aid of all drawn-out combs ready for the bees. The strongest colonies had 5 stories to the hive, 8 frames each—40 frames all together; 8 frames of brood, 32 frames of honey, 8 lbs. of honey to the frame, 256 lbs. of white honey from the strongest colonies. They have 2500 pounds of honey on their hives now, Sept. 9th. Our Fair was last week. I got $38.50 in premiums on bees and honey; $5 for the best Italian queen.

Yours truly, F. M. JONES.

Discount given on large orders. Price-list ready soon.

T. S. Hall, Jasper, Pickens Co. Ga.

Please mention Am. Bee Journal when writing.

M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

Please mention Am. Bee Journal when writing.

Root's Goods in Chicago

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated. Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

> "Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.
> 43 N. Brighton Ave., East Orange, N. J.

This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only $1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

> LANG, CALIF., Sept. 26, 1909.
>
> *Gentlemen:*—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of of expense. The cost of gasoline and oil used being only 16¢ per ton of honey extracted. It takes the place of a man at $40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here. Truly,
>
> H. A. SLAYTON.

Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

Our Location and How to Reach It

The A. I. Root Co. 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

Elkhart Buggies

are the best made, best grade and easiest riding buggies on earth for the money.

FOR THIRTY-SEVEN YEARS

we have been selling direct and are

The Largest Manufacturers in the World

selling to the consumer exclusively.

We ship for examination and approval, guaranteeing safe delivery, and also to save you money. If you are not satisfied as to style, quality and price you are nothing out.

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.
Elkhart, - - - - Indiana

Save $30

Please mention Am. Bee Journal when writing.

Golden Queens

NOW READY

Virgins, 50c; Untested, 75c; Select Untested 90c; Tested, $1.00; Select Tested, $1.50.

Write for prices on 6 or more. 4A3

A. I. Davis, Del Rio, Tex.

Please mention Am. Bee Journal when writing.

Sweet-Potato Seed

Direct from storage to consumer. Sound, bright stock. Yellow Jersey at $1 per bushel measure. Discount on large lots. Other varieties. Write for descriptive price-list.

L. H. Mahan, Box 143, Terre Haute, Ind.

lease mention Am. Bee Journal when writing.

New England Bee-keepers!

New Stock at Factory Prices

—:PROMPT DELIVERY:—

Cull & Williams Co.

Providence, - Rhode Island.

Please mention Am. Bee Journal when writing

DOOLITTLE & CLARK

Are now booking orders for Italian Breeding Queens, at $2.50, $5.00 and $10.00 each. These Queens are mated to Selected Drones. Send for Circular.

4A2t **Borodino, Onondaga Co., N. Y.**

Please mention Am. Bee Journal when writing.

WASHINGTON QUEENS!

Wurth's Best Queens are as good as money can buy.

I have leased all of Sires Bros. Co.'s bees, with the exception of 100 colonies. I have control of seven hundred colonies of bees, and have the largest and best queen-rearing outfit in the State, with 40 years' practical experience

Bee-keepers from any part of world need not hesitate in sending me their orders, as they will get the best queens that can be reared under the latest and best improved methods.—Safe delivery and satisfaction guaranteed.

Prices of Either Golden or 3-Banded Queens.

Untested, $1 each; six for $5; 1 doz. for $9.75.
Tested, $1.50 each; three for $4.25; six for $8.25; 1 doz. for $15.
Select Tested, $2 each; three for $6.75; six for $10.

Queens ready to send by return mail. Send all orders to—

DANIEL WURTH,
4Atf Rt. 1, WAPATO, WASH.

Please mention Bee Journal when answering this advertisement.

Golden and Red-Clover Queens...

From Extra-Selected Mothers

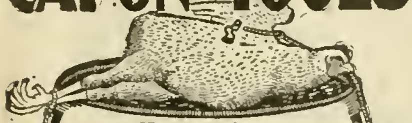
Untested, 75c; six for $4.00.
Selected Untested, $1.00; six for $5.00.
Tested, $1.50.

Safe arrival guaranteed. Twenty-one years' experience. Send your orders to

E. A. Simmons, Greenville, Ala.

Please mention Am. Bee Journal when writing.

CAPON TOOLS



CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

Please mention Am. Bee Journal when writing.

Messrs. BEE-MEN, Honey-Producers & Co.

Has your concern our 1910 catalog?

How do you expect to do business without it?

We want it on the desk of every good buyer of goods wanted for **BEES**—whether he operates one hive or one thousand. Our prices are right, and the freight from

TOLEDO

—well, you know what this means.

We want to call your attenion to the back cover of our Catalog, and will ask you to pin this to your mind. It means something to honey-producers.

Beeswax wanted — Cash or in Trade.

The GRIGGS BROS. CO.
24 North Erie St.,
TOLEDO, OHIO.

The Practical BEE AND CHICKEN Men

Again to the Front with The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to furnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

"If goods are wanted quick, send to Pouder"
ESTABLISHED 1889.

BEE-SUPPLIES

Standard Hives with latest improvements; Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, Veils, and a complete stock of

Root's Standard Goods at Factory Prices

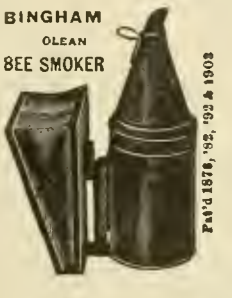
My equipment, my stock of goods, and my shipping facilities, cannot be excelled, and I ship goods to every State in the Union. Illustrated and descriptive catalog mailed free.

Finest White Clover Honey
on hand at all times. **I Buy Beeswax.**

Walter S. Pouder, Indianapolis, Ind. 859 Massachusetts Ave.

HAND-MADE SMOKERS

BINGHAM CLEAN BEE SMOKER



Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made	$1.50—4	inch stove
Doctor—cheapest made to use	1.10—3½	"
Conqueror—right for most apiaries	1.00—3	"
Large—lasts longer than any other	.90—2½	"
Little Wonder—as its name implies	.65—2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.

Patented, May 20, 1879. BEST ON EARTH.

LEWIS BEEWARE — Shipped Promptly

SEND FOR NEW CATALOG

Extracted Honey for Sale. (Ask for Prices.)

Beeswax Wanted. 28c Cash—31c Trade.

ARND HONEY & BEE-SUPPLY CO. NOT INC.

(Successors to the York Honey & Bee-Supply Co.) H. M. ARND, Proprietor.
148 West Superior St., CHICAGO, ILL.

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

Honey Wanted.

All grades of Comb and of Extracted. 2000 cases of Buckwheat Comb wanted at once. What have you to sell? Third car of water-white Sage just in. Write for prices.

THE GRIGGS BROS. CO.
11Atf TOLEDO, OHIO.

FENCE *Strongest Made*

Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 37 heights of farm and poultry fence. Catalog Free.

COILED SPRING FENCE CO.
Box 89 Winchester, Indiana.

Please mention Am. Bee Journal when writing.

Established 1885

We carry an up-to-date Line of

Bee-Keepers' Supplies

Prices the lowest in the West. Write us for our 50-page catalog, ready to mail you. Free for the asking. We can fill your orders promptly and satisfactorily. Our old customers know what we handle; to new ones we can say that we have

The Best Make of Supplies

hence there is nothing to fear as to quality.

Send us your rush orders and get your goods before swarming time arrives.

Bees and Queens in their season.

Beeswax taken in exchange for supplies or cash.

John Nebel & Son Supply Co.

High Hill, Montg. Co., Mo.

Alsike Clover Seed.

Small and large Red, Alfalfa, and Timothy Seed for sale. Seed recleaned and choice. Write for prices.

Catalog of APIARIAN SUPPLIES FREE. Address,

F. A. SNELL,

2A3 MILLEDGEVILLE, Carroll Co., ILL.

Please mention Am. Bee Journal when writing.

Of Interest

FOR the past 50 years New England bee-keeepers have purchased Bees, Queens, Bee-hives, Supers, Section - boxes, Comb Foundation, Smokers, Honey-jars, and other necessary bee-supplies, of the Reliable and long-established firm of W. W. Cary & Son.

I have recently purchased the above business, and will continue it at the same place as before. I have been associated with the firm for the past eight years, and have had experience in all branches of the business.

I have a fresh supply of the A. I. Root Co.'s goods, which I am able to supply you upon short notice. Send in your orders early and I will give them my best attention. 4A6t

Send for Bee-Supply Catalog.

EARL M. NICHOLS,

(Successor to W. W. Cary & Son)

Lyonsville, - Massachusetts

For Sale 12 Indian Runner Duck eggs, $1.00. 15 White Wyandotte eggs, $1.00; 15 Rose Comb Rhode Island Reds, $1.50. 2A3t

J. F. MICHAEL, Rt. 1, Winchester, Ind.

Write Us To-Day

for our 1910 Catalog and let us tell you all about

DITTMER'S

COMB FOUNDATION

and

WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line** of **Supplies.** It will pay you, and costs nothing.

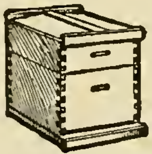
RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

BARNES' Foot-Power Machinery

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter. 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. & JOHN BARNES,**
995 Ruby St., Rockford, Ill.



Latest Improved Hives & Supplies. Disc'nt on early orders. Catalog free. Send 25 cts. for 90-page Bee-Book for beginners.

J. W. ROUSE,

3Atf MEXICO, MO.

AGENTS:— IF I KNEW YOUR NAME, I would send you our $2.19 sample outfit free this very minute. Let me start you in a profitable business. You do not need one cent of capital. Experience unnecessary. 50 percent profit. Credit given. Premiums. Freight paid. Chance to win $500 in gold extra. Every man and woman should write me for free outfit.

9A6t **JAY BLACK, Pres., 305 Beverly St.; Boston, Mass.**

CRANE CELLULAR CASES

Mr. H. W. Coley, of Westport, Conn., writes us:

"I am using your Corrugated Paper Cases for shipping comb honey in, this year, and like them. On one shipment last year of six wooden cases packed in a carrier with a straw cushion, the greater part were ruined. This year the same quantity shipped to the same place in your cases went through without a broken comb."

1. **The first cost of the Paper Cases is less.**
2. **He saved the cost of the carriers.**
3. **He saved the time of making the carriers.**
4. **He saved the weight of the carriers.**
5. **The Paper Cases weigh less than wooden ones.**
6. **They can be assembled in one-half the time it requires to set up a wooden case.**

Send for our Circulars and let us tell you what some of the other large producers and dealers say.

Do not take our word for the value of this new Case.

Plan to order early. Some were disappointed last year.

J. E. Crane & Son, Middlebury, Vt.

Honey and Beeswax

CHICAGO, March 28.—The season is now about over for the sale of comb honey in large quantities, but it finds the market well cleaned up, and prices are steady at from 17@18c on A No. 1 to fancy white, and from 1@3c less for the lower grades. Extracted honey is meeting with only fair sale, and the prices are inclined to be easy, with white selling at from 7@8c, according to kind, body and flavor; ambers from 6@7c, with dark grades bringing about 6c. Beeswax is in active demand at 32c per pound.
R. A. BURNETT & CO.

INDIANAPOLIS, March 28.—There is a good demand for best grades of honey, but none is now being offered by producers. Dealers are fairly well supplied with one grade of comb, which is fancy white, mostly from Michigan, and 18c is the price asked. Finest white clover extracted is being sold by dealers in cases of two 60-pound cans at 10c per pound. Producers of beeswax are receiving 29c cash, or 31c in exchange for goods.
WALTER S. POUDER.

TOLEDO, March 30.—There is not much change in the honey market since our last quotations. The demand is fair for this season of the year. Fancy and No. 1 brings 16@17c per pound in a retail way, depending on the quantity bought. No demand for dark or amber grades. Extracted is in fair demand, as follows: Sage brings 8½@9c; white clover, 9@10c; amber, 6½@7c; dark, 5½@6c. Beeswax is in good demand at 32c; fancy yellow, 33c. These are our selling prices.
THE GRIGGS BROS. CO.

NEW YORK, March 28.—Very little doing in comb honey. There is some demand for No. 1 and fancy white. We are receiving small lots right along, which evidently have been held back. Off grades are in very poor demand, and no demand for dark or buckwheat. Strictly fancy and No. 1 white will still bring 14c, while off grades and mixed will not bring over 11@12c, according to quality. For extracted, demand is fair only, with sufficient supply especially of California. We quote: Water-white sage, 9c; white-sage, 8@8½c; light amber, 7@7½c; amber, 6@6½c. Cuban and West India, from 68@75c a gallon, according to quality. Beeswax steady at 30c per pound.
HILDRETH & SEGELKEN.

CINCINNATI, March 28.—The market on comb honey is bare. Extracted honey is in good demand. Sage, in 60-pound cans, 8½c; amber, in barrels, 6½@6¾c. Beeswax in fair demand at $33 per 100 pounds. These are our selling prices, not what we are paying.
C. H. W. WEBER & CO.

KANSAS CITY, MO., March 28. There is no comb honey in the jobbers' hands; and very little in the retailers'. The supply of extracted is not large, demand fair. We quote: No. 1 white comb, 24 sections to case, $3.75; No. 2 white and amber, $3.50. White extracted, per pound, 7c; amber, 6½@6¾c. Beeswax, 25@28c.
C. C. CLEMONS PRODUCE CO.

BOSTON, March 28.—Fancy white comb honey at 16@17c; No. 1, 15@16c. White, extracted, 8@9c; light amber, 7@8c; amber, 6@7c. Beeswax, 30@32c. BLAKE, LEE CO.

ZANESVILLE, OHIO, Mar. 29.—The demand for honey continues about normal. As the new season approaches there is a disposition on the part of producers to make concessions in prices, though but little is being offered now. Producers should receive here, first-hand, for best white comb, 15@15½c, delivered; and for best grades of extracted, 8½@9c. In a wholesale way, the usual margin of about 2c on comb, and 1@2c on extracted, prevails. Beeswax of good quality yields the producer 28c cash; 31c in exchange for merchandise.
EDMUND W. PEIRCE.

Baby Chicks 8 cts. each. Eggs for hatching. $4 per 100. All kinds poultry at lowest prices. Guarantee safe arrival anywhere. Write for price-list. 10A6t
CULVER POULTRY FARM 1015 Reed, BENSON, NEBR.

FALCON FOUNDATION

Years of experience in the manufacture of

FALCON COMB FOUNDATION

have made it PERFECT.

Bees like it, and the foremost

Honey-Producers Use It.

It helps materially to increase the

Honey Crop

(Send for our new Catalog.)

Ship us your

BEESWAX

to FALCONER, N. Y.

Will send shipping-tags, when you write asking for quotations.

We pay highest market prices.

W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

SUPERIOR BEE-SUPPLIES
Specially made for Western bee-keepers by G. B. Lewis Co. Sold by
Colorado Honey-Producers' Association,
DENVER, COLO.

As Usual—

FRANKLIN, TENN., Feb. 19, 1910.

MR. C. H. W. WEBER,
Cincinnati, Ohio.

DEAR SIR:—Your consignment has arrived all O. K., and I find everything I ordered. I wish to extend many, many thanks for your promptness and fair dealing. All future orders will be sent to you.

Very truly yours,
W. A. MOORE.

I want you to notice Four Things in the above Letter:

I.—The goods reached Mr. Moore O. K. We know how to pack carefully and securely, and without any useless weight.

II.—He found everything ordered. We carry large stocks always on hand, and our system of checking prevents annoying mistakes.

III.---The advantages we have for prompt delivery are unsurpassed. If you want goods quick, send to Weber.

IV.---Fair dealing is now and always has been our motto.

CATALOGS have been mailed to nearly all our customers. If you have not received yours, send us a line and we will get one to you by return mail.

Yours for service,
2146 Central Ave., Cincinnati, Ohio. C. H. W. WEBER & CO.

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BEE-KEEPERS OF THE WEST

BEE-KEEPERS OF THE EAST

Be Sure to get our PRICES on

BEESWAX

Before selling your season's Wax
or
Let us send to you our prices for
Working your Wax into

DADANT'S
FOUNDATION

Many large Honey-Producers prefer our Foundation to other makes, because the bees like it best.

We can use almost an unlimited quantity of BEESWAX, and we are buying at all times of the year **at highest cash and trade prices.**

During the season of 1909 we handled over 175,000 pounds of Beeswax.

BEE-SUPPLIES
OF ALL KINDS.

We Keep Only the Best.

Let us Figure on
Your Season's Supplies

1910 CATALOG

Now Ready,

and Free for the Asking.

DADANT & SONS, Hamilton, Illinois.

BEE-KEEPERS OF THE SOUTH

Established 1864

Bee-Keepers' Supplies

℄ We manufacture and furnish everything needed in practical, up-to-date BEE-Culture at the very lowest prices. We make the celebrated **DOVETAILED HIVES** and the famous **MASSIE HIVES.** These are the most practical, up-to-date Bee Hives made and our extremely low prices place them within the reach of all bee-keepers. Our HONEY EXTRACTORS and BEE SMOKERS are the very best that can be had anywhere. *We guarantee satisfaction to every customer* or refund your money and pay the transportation charges both ways. This means that you can send back to us any goods you buy from us that are not satisfactory. We will exchange them or refund your money instantly without a question.

℄ If you haven't one of our **CHAMPION SMOKERS** you don't know what a good one is until you get one, (sample by mail $1.00).

℄ Write today for our large illustrated catalog—it is free; it is one of the easiest catalogs to order from that you ever saw. *Remember our guarantee of entire satisfaction.*

℄ Write us for prices on any orders. *We can save you money.*

Kretchmer Mfg. Co., Council Bluffs, Iowa

GOLDEN JUBILEE

No. 5

MAY
Agricultural
College

AMERICAN BEE JOURNAL

MAY——1910

Mass Agl College apr15
Library Amherst, Mass

THE AMERICAN BEE JOURNAL.

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY

146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada, $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec10" on your label shows that it is paid to the end of December, 1910.

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UNTESTED Italian Queens, 75c; Tested, $1.50. Cyprian, Carniolan, Caucasian and Banats—Sel. Untested, $1.00; Select Tested, $2.00. Until June 1st — Foundation, Medium Brood 50c, Light 52c, Thin 57c, Ex.-Thin 60c. 1-Story 8-Fr. Root Dovetailed Hive, in flat—$1.45; 5 for $6.65; nailed and painted—1, $1.85; 5, $9.00. Danz. 5c additional. Send card for Catalog. **W. C. MORRIS,**
4A2t Nepperhan Hgts., YONKERS, N. Y.

Please mention Am. Bee Journal when writing.

Queens Three - Banded Leath'r-Colored Italian QUEENS. Selected Untested, $1.00 each; 6 for $4.50. Also—FULL COLONIES and NUCLEI For Sale. Circular Free.

3A8 **O. F. Fuller, Blackstone, Mass.**

REF.—Arthur C, Miller, Providence, R. I.

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Untested Italian Queen-Bees

Our Standard-Bred

6 Queens for $4.00; 3 for $2.10; 1 for 75 cents.

For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

GEORGE W. YORK & CO.:—The two queens received of you some time ago are fine They are good breeders, and the workers are showing up fine I introduced them among black bees, and the bees are nearly yellow now, and are doing good work.
Nemaha Co, Kan, July 15. A. W. SWAN.

GEORGE W. YORK & CO.:—After importing queens for 15 years you have sent me the best She keeps 9 1-2 Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week.
Ontario, Canada July 22. CHAS. MITCHELL

GEORGE W. YORK & CO.:—The queen I bought of you has proven a good one, and has given me some of the best colonies.
Washington Co., Va., July 22. N. P. OGLESBY.

GEORGE W YORK & CO.:—The queen I received of you a few days ago came through O. K, and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. MCCOLM.
Marion Co., Ill., July 13.

We usually begin mailing Queens in May, and continue thereafter on the plan of "first come first served." The price of one of our Untested Queens alone is 75 cents, or with the old American Bee Journal for one year—both for $1.40. Three Queens (without Journal) would be $2.10, or 6 for $4.00. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage. You cannot do better than to get one or more of our fine Standard-Bred Queens.

George W. York & Co., 146 W. Superior St. Chicago, Ill.

Please mention Am. Bee Journal when writing.

Mott's Strain of Italians!

Will work red clover. 90c Untested; $1.25 Tested. **Five-Banded Golden,** the same.—Natural Golden from Imported stock, extra. Ask for List. Reduced rates in July.

NUCLEI. Leaflets — "How to Introduce Queens," 15c; "How to Increase," 15c—both, 25 cents. 4Atf

E. E. MOTT, Glenwood, Mich.

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Write us now for our Catalog and get low prices on good, honest,

BEE-KEEPERS' SUPPLIES

Our specialty is making Sections. All other goods up-to-date.

AUG. LOTZ & SON, Cadott, Wis.

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NOBODY GETS STUNG

WHEN HE IS WISE ENOUGH TO USE THE DANDY

MUTH IDEAL BEE VEIL

3 HONEST OPINIONS

"IT'S THE BEST ON THE MARKET"—DR. D. EVERETT LYON, ALLENDALE, N. J.

"IT IS A VERY GOOD VEIL"—MR. W. T. FALCONER (MODEST BUT DECIDED)

"IT'S THE VEIL"—MR. FRANK RAUCHFUSS, DENVER, COL.

AND IF TEDDY HAD HAD ONE WITH HIM IN AFRICA, HE WOULD SURELY HAVE BEEN

"DE-E-E LIGHTED"

You need this veil more than you do the 75c it costs, delivered. And why are you waiting to ask for our catalog of bee supplies? It's free.

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Sold at reduced prices. Dovetailed Hives. Sections, and everything pertaining to bee-keeping of the **very best** kept in stock. Large Warehouse on of L. S. & M. S. R. R.

Wholesale and Retail. New price-list just out—**Free.** Let me figure on your wants.

11Atf **W. D. Soper, Jackson, Mich.**

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Protect your Hives and Boxes air and water tight, and you will double your money. Ask me for FREE information today. Address,

JOHN TOTH,
Bee-Keepers' Supplies
From East to West
Mapleton, Ill. U.S.A.

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SWARTHMORE PEDIGREED GOLDENS

Queens from the well-known Swarthmore Apiaries of the late E. L. Pratt. The *brightest hustlers* and the most *gentle* pure strain of **Goldens** in the U. S. 5A5t

The Swarthmore Apiaries, Swarthmore, Pa.

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Closing Out Offer

We Have Some Copies Left of the Book

"Bees and Honey"

By Thomas G. Newman

bound in cloth, that we offer cheap to close out. It contains 160 pages, and is bound in cloth. It used to be a one-dollar book, but we will mail them, so long as they last, at 50 cents each; or with the American Bee Journal one year—**both for only $1.20.** Surely this is a bargain. The book is well illustrated, and has some good information in it, especially for beginners. Address all orders to

George W. York & Co.,
146 W. Superior St., Chicago, Ill.

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This is the only Place in Indiana

Where you can get this Combination—

Prompt Service
—AND—
Lewis Beeware

Lewis Wisconsin Hives are winners.

Lewis Dovetailed Hives are in a class by themselves.

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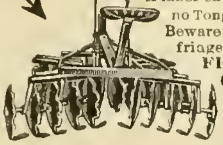
IMPROVED CLARK'S DOUBLE ACTION CUTAWAY HARROW

The most wonderful farm tool ever invented. Two harrows in one. Throws the dirt out, then in, leaving the land level and true. A labor saver, a time saver. Needs no Tongue Truck. Jointed Pole Beware of imitations and infringements. Send today for **FREE Booklet.**



CUTAWAY HARROW CO.
913 Main St.,
Higganum, Conn.

Italian Bees For Sale.

In 8-frame Langstroth hives. 1 Colony, $5; 2 for $9; 5 for $20. Italian Queens—Untested 75c each; 6 for $4. Select Tested, $1.25 each; 5 for $6. 4A6t

L. Boomhower, Freehold, Greene Co., N. Y.

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Carniolan Queens.

	1	6	12
Untested......	$1.00	$5.50	$10.00
Tested.........	1.25	6.75	12.75

5A5

Wm. KERNAN, R. D. No. 2, Dushore, Pa.

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Write Us for Prices

We will make you delivered prices by return mail, on anything you may want for your apiary.

We Manufacture

Dovetailed Hives, Hoffman Frames, Sections, Separators, Shipping-Cases, etc. Also Berry Boxes and Crates.

There are no better HIVES than ours.

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One large carload of the best grade of lumber going into the manufacture of the above perfect article every day.—One hundred thousand Sections and hundreds of hives in addition to other goods coming from our machines daily.

Lewis Bee-Hives

built like furniture

This is the Brand —— BEWARE WHERE YOU BUY YOUR BEEWARE WATERTOWN LEWIS WIS U.S.A. MAKES THE FINEST —— **WATCH FOR IT**

See what they say:

Grand Rapids, Mich., April 2, 1910.

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Gentlemen:—We have just had occasion to examine the dovetailing on the recent shipment of 2000 Dovetail Hives, and find them absolutely perfect. We have always considered the work done heretofore as good as they could be made, but your new machines must be absolutely perfect to the hair in order to turn out such work. We have never before seen anything in the bee-hive market that compare with them. This accounts for the many enthusiastic reports received on goods we have shipped.

Very truly yours,
A. G. Woodman Co.
A. G. Woodman.

Hamilton, Ill., April 9, 1910.

G. B. Lewis Co., Watertown, Wis.

Gentlemen:—We are in receipt of your letter of the 4th in regard to the new dovetailing done on your hives. We have always thought "Lewis" goods to be far ahead of any other make in quality and workmanship. That the new dovetailing is perfect goes without mention. This new feature will add to the already great popularity of "Lewis" goods.

Truly yours,
Dadant & Sons.
L. C. D.

Thirty——Distributing——Points

Send for our Catalog. It is free, and will tell you the nearest point from which we can supply you.

G. B. Lewis Co., Watertown, Wis.

AMERICAN BEE JOURNAL

L. L. LANGSTROTH
DADANT

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

Published Monthly at $1.00 a Year, by George W. York & Company, 146 West Superior Street,

GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., MAY, 1910

Vol. L---No. 5

Editorial Notes and Comments

Red-Clover Bees!

Occasionally some beginner reads or hears about red-clover queens or red-clover bees, and understands that there is a race of bees distinct from all others, just as Italians are distinct, and that if he gets one of the red-clover queens he will be able to red-cloverize his apiary, just as he might Italianize it, and have his bees work on red clover just as freely as they do on white clover. Disappointment may await him.

There are differences in bees in many respects. In the same apiary colonies having the same origin may show quite a difference in temper. More commonly than perhaps some may think, ordinary bees work at times at least a little on red clover. At such times Smith notes by careful observation that one colony excels the rest in the amount of red-clover honey obtained. Naturally he calls that colony a red-clover colony, and queens obtained from it red-clover queens. But Smith has no monopoly of the business. Jones makes the same discovery among his bees, and he, too, has red-clover queens. Others likewise. Neither is there anything wrong in any one of them selling red-clover queens. The unfortunate part is that the trait is not fixed, and the beginner who expects to red-cloverize his whole apiary finds that after a generation or two he is just where he was before getting the new stock.

Prevention of Swarming

The plan given on another page by C. L. Grigsby is a variation of the Demaree plan, given to the public some years ago by G. W. Demaree, of Kentucky. Mr. Grigsby operates just before it is time for queen-cells to be started. It is not always easy to guess at this time correctly, and the usual way is to operate just a bit later, and if some or most of the colonies have started queen-cells, they are destroyed. Mr. Grigsby says nothing about excluders, but the probability is that a queen-excluder is put over the lower story, otherwise the queen would be likely to go up at once into the story having the brood. In his case queen-cells were started in the brood above, and the bees afterward destroyed these cells. Bees do nothing invariably, and it may be possible that another year the bees may not be so obliging, and it may be necessary for the bee-keeper to intervene. Many who work for extracted honey have found the Demaree plan excellent. Pity it will not work so well for comb honey.

Illinois Board of Agriculture and Bee-Keeping

This office is in receipt of the Statistical Report of the Illinois State Board of Agriculture, dated Dec. 1, 1909, Springfield, Ill., J. K. Dickerson, Secretary. Naturally, the first object of interest is the report on Bees and Honey.

On page 25, the report gives 54,985 colonies of bees, which yielded 324,333 pounds of honey, the average price of which was 15 cents a pound. Some bee-keeper, upon reading that will say, "My honey was of the best quality, and all I could get for it was 8 cents. I wonder who the fellow was who got such a high price as to bring the average up to 15 cents." Of course, his honey was extracted, although equally of course the report includes both comb and extracted. Market quotations for Chicago up to the close of 1909, show 16 cents as the highest for best comb, and 8 cents for best extracted. That certainly would not average 15 cents. But some of the honey was sold in home markets, and may have brought a much higher figure.

A table shows bees, honey, and price for 1891 to 1909, inclusive. In 1891 there were 120,252 colonies in the State, dropping to 81,928 (1892); since then the number has averaged somewhere in the neighborhood of 55,000, except in 1896, when it was 43,411. The smallest yield of honey was 316,701 pounds in 1906; the largest was 821,678 in 1891.

Comparing the crop of 1909 with that of the preceding year, we find that the number of pounds of honey produced in 1908 was not quite 6 percent more than in 1909. As 1908 was a bumper year, and 1909 was generally voted a failure, it is hard to believe there is not some mistake about this, especially as there was little difference in the number of colonies.

The figures show that in the bumper year 1908, the average yield per colony was a little less than 6½ pounds. Surely there must be something wrong about that.

At page 86 begins a report for each separate county. Referring to a single county, McHenry county is reported for 1908 with a crop of 230 pounds! As a matter of fact, a single bee-keeper in that county had more than 75 times as much. If the reports of other counties are no more reliable, little reliance can be placed upon the whole affair.

In the report of the Illinois State Bee-Keepers' Association for 1908, we find that only 128 members reported their crops, but these 128 secured 471,429 pounds of honey, considerably more than reported for all the bee-keepers of the State in the figures before us.

It may not be easy to say just where the fault lies, but if nothing more reliable can be given, it might be better not to undertake a report which only belittles the business of bee-keeping.

Disinfecting Foul-Broody Hives

In the British Bee Journal, D. M. Macdonald quotes the latest pronouncement from the Bureau at Washington, that "We can be sure of complete disinfection by burning out the hive," immediately following it by this:

> "I am neither a prophet nor the son of a prophet, but I am all but confident Dr. Miller will have a sad awakening when he finds next season that he has failed to kill, and has not even scotched, the snake."

Our good Scotch friend may be assured that although there may be disappointment there can be no rude awakening, for there has been no falling to sleep in the comfortable assurance that no return of the enemy was possible. Indeed, there can be scarcely any disappointment, for under all the circumstances the return of the disease is not unexpected. In the first place, the treatment was in part of the cases experimental, with no certainty as to its success. In the second place, there being in the State of Illinois no law to prevent a man from cherishing foul brood if he so desires, and diseased colonies in all direction being conveniently near to supply fresh infection, it will be a surprise if there shall not be fresh cases.

But if every colony in the apiary should become infected, it will be no proof that the fault lay in not disinfecting the hives. Indeed, it may not be easy, if at all possible, to tell anything about it. In default of anything better, however, one may be allowed to fall back upon the testimony of the many experienced foul-brood inspectors of this country who claim that thousands of hives not disinfected have been used with no bad results. If any considerable number of these inspectors are strongly impressed with the idea that disinfection of hives is necessary, they are certainly not making any great noise in making that belief known.

Is there any positive proof that foul brood was ever conveyed by a hive that had contained a diseased colony? Please remember that the occurrence of foul brood in such a hive is *not* satisfactory proof that the hive was the disease-carrier unless all other sources of infection are entirely eliminated. It is not denied that the disease has arisen in foul-broody hives that have not been disinfected, but it is equally true that it has arisen or returned in hives that have been disinfected. Neither is it denied that it is an entirely safe thing to disinfect hives, but the likelihood is that until there is positive proof that a reasonable percentage of foul-broody hives will carry the disease, a good many will continue to believe that disinfecting hives does not pay.

Mendel's Law of Breeding

T. W. Ramm sends a clipping relating to this matter which he thinks of interest to bee-keepers. George Mendel, an Austrian monk, made experiments 50 years ago in breeding plants, and claimed to have discovered a law relating to crossing that could be relied on:

"Mendel held that where two strongly contrasting strains were crossed, one would be likely to prove itself dominant. The resulting first generation of offspring would all be like the dominant strain. Members of this generation would beget offspring three-fourths of which would follow the dominant strain; but one-fourth would react to the weaker grandparent and show the characteristics of that member that had appeared absolutely absent in the first generation. In the third generation these characteristics of the weaker member would reappear in the descendants of those that had shown it in the second, *and remain fixed*, reproducing themselves indefinitely. So would the characteristics of 25 percent of the dominant strain in this generation become fixed. This would leave an unfixed 50 percent that would breed another generation with the characteristics partly unfixed and in the same proportion as the previous generation. All the generations that followed from this unfixed division would be like the third generation in the characteristics and their proportions."

For some time not very much attention was given to this, but of late years the Government has taken it up. At Bethesda, in the outskirts of Washington, is located an experiment station of the Bureau of Animal Industry, Department of Agriculture, and experiments made here, not upon plants but upon rats, have established the correctness of Mendel's law, an entire building being filled with cages of rats.

While of exceeding importance to the stock-raiser, it is not so certain that bee-keepers will be benefited by Mendel's law so long as fertilization is not at all under control in the breeding of bees.

Rear or Buy Queens—Which?

It is a question sometimes whether it is better for the honey-producer to buy queens or to rear them. Probably the same rule does not hold good for all. The great majority, no doubt, rear their own queens, but it may be a question whether some large producers might not do better to buy. So good a bee-keeper as M. A. Gill, after trying both ways, says he cannot afford to rear his own queens. Having over 1000 colonies, he can spend his time more profitably at other things, and pay some one else for rearing his queens.

The amateur with only 2 or 3 colonies is often in need of a queen—sometimes he has scant notice of the need—and he may save money by buying. But the amateur will tell you that he is not in the business for the money so much as the pleasure, and as queen-rearing is "the poetry of bee-keeping," he does not want to be deprived of that pleasure.

Returning to the large-producer, it ought to be true that he cannot produce queens so cheaply as the man who makes a specialty of queen-rearing. Another locality may be more favorable for queen-rearing than the one occupied by the honey-producer. The queen-rearer has everything arranged for the business. In short, it is like any other business—a man can buy from the large manufacturer for less money than it costs him to produce his own goods.

To this the honey-producer may reply, "Yes, it costs me twice as much to rear my own queens, and they are worth three times as much as those I can buy from Tom, Dick, and Harry. By breeding always from my best stock I can increase my crop of honey to such an extent that it will pay, many times over, the extra cost. If I buy from Tom, Dick, and Harry, about all I know of the queens is their *looks*, and while I like pretty bees, I care more for those that will 'deliver the goods.'"

All this must be admitted. Moreover, it is true that only the man who produces honey can really tell what is best stock. A man may rear a million of queens, but if he never does anything but rear queens, he knows nothing about their worker-progeny as honey-gatherers.

While all this may be true, it is not the whole of the story. One does not need to buy of Tom, Dick, and Harry. One may buy of a queen-rearer who is thoroughly reliable. Suppose A is such a man, and B a honey-producer. It will not cost B 5 cents to send his best queen to A, and why may not A rear from her just as good queens as B would, and for less money? There is no law against doing even better than that. If B sends his best queen to A to have his young queens reared from, so may C and E, and a dozen others. Having all these choice queens on hand, what is to hinder A from pitting them against each other, and finding out which is the best of the lot *as a honey-producer*? And, in general, what is to hinder A from skirmishing about and getting from men who are reliable as honey-producers their best stock, and then selecting again the best of the best? And if A is honest and intelligent, something of that sort is exactly what he will do.

There is still room for improvement in stock, and if the land is to be stocked with the very best, there must be intelligent co-operation between queen-rearers and honey-producers.

Miscellaneous News-Items

Schroeder's American Visit

Alexander Schroeder gives in Illustrierte Monatsblaetter a pleasant detailed account of his visit to the apiary of W. H. Horstmann, Chicago, a picture of the apiary accompanying. Such men as Mr. Schroeder help to lessen the distance between the two countries.

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Time to Spray Fruit

The Journal of Agriculture, of Victoria, contains some "Orchard Notes," by J. Cronin, Principal of the School of Horticlulture, which it would be well if every fruit-grower could read. It is shown that it is a serious mistake to suppose that fruit-*blossoms* should be sprayed. Mr. Cronin says:

The codlin-moth is popularly supposed to develop into the perfect egg-laying stage about the blossoming period, and it lays its eggs in the calyx or eye of the young fruit, or as some few people assert in the blossoms. The practice of people holding this belief is to try and fill the eye of the fruit with the poison, whatever it may be, and to depend largely, if not altogether, upon the one application. The facts are that few eggs are laid during the blooming time, except in case of late-flowering varieties that are not specially attacked in the eye on account of being in flower when the moths are plentiful, and the majority of the eggs, at least, are not laid in the calyx, or even near it. Also, the calyx is often closed, and the fruit fairly large, before any evidence of codlin-moth is present, and the first trace is the egg *on the fruit*, and the young insect attacking from the side. Many, if not all, of the supposed attacks from the calyx end of the fruit will be found on examination to be made from outside the calyx, and underneath its lobes, and not from the interior of the cavity. It is positive waste to spray apples and pears when in blossom; it is erring, possibly, on the side of safety, to spray very thoroughly before the calyx closes. But it is absolutely necessary, in the writer's opinion, to spray very carefully when the first eggs are seen, and to repeat spraying periodically as fruits are swelling, after very heavy rains, or when by any reason whatever there is an untreated surface of the fruit exposed.

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Gen. Mgr. France Injured

On the evening of March 31st, as General Manager N. E. France and wife were mailing the last buggy-load of the pamphlet "Bee-Keepers' Legal Rights," they met with serious injuries through another team running into their buggy, up-setting it, and causing a runaway. We are glad to report that both Mr. France and his good wife are getting along nicely, and doubtless in due time will be as good as new again. At any rate, their hosts of friends will rejoice that they were not more seriously injured.

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New Factory of G. B. Lewis Co.

April 28th we visited again the new factory of the G. B. Lewis Co., of Watertown, Wis. When we were there last fall everything was but in prospect, as only the brick walls of the main building were up. Now 30 or 40 machines are running in the building, and things certainly are humming. Next month we will be able, with the aid of illustrations, etc., to show something of the development of a large bee-supply factory from the ground up. The G. B. Lewis Co. were working 13 hours a day, and were still somewhat behind on their orders, but at the rate they were turning out the goods they would soon be caught up, and ready for practically everything that comes to them. But more of this next month.

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Illinois State Convention Report

The 9th Annual Report of the Illinois State Bee-Keepers' Association is ready for delivery. It will have 224 pages. About 50 copies extra of the cloth-bound edition have been ordered, which new members will receive so long as they last, when they pay the annual fee of $1.00 to the undersigned, which also will make each one a member of the National Bee-Keepers' Association.

The Illinois State Association will send a delegate to the next National convention.

JAS. A. STONE, *Sec.*

Rt. 4, Springfield, Ill.

The above Report is, we believe, one of the largest volumes ever issued by the Illinois Association. It contains, besides other interesting matter, the reports of the 1909 conventions of the Illinois State Bee-Keepers' Association, the Chicago-Northwestern Bee-Keepers' Association, and also the National Bee-Keepers' Association. It will be a book worth having, and any bee-keeper who has not yet sent in his $1.00 for membership should do so at once in order to get one of the cloth-bound copies. Remember that there are only about 50 available copies, and if you want one of them, you will have to remit to Mr. Stone very promptly. The $1.00 will pay your membership fee in both the Illinois State and the National Associations, as mentioned by Mr. Stone.

Summer Course in Bee-Keeping

The South Dakota State College of Agriculture and Mechanic Arts announces a summer session for 1910, beginning Wednesday, June 22d and continuing to July 13th. The courses of instruction are open to any one who desires to take advantage of them. The bee-keeping instruction, which is part of the course, will be given along the lines of starting an apiary, increase of colonies, hiving and managing, producing of comb honey, etc. Prof. A. A. Brigham, director of the summer school, will deliver lectures on poultry culture and bee-keeping. For further information, address A. A. Brigham, care South Dakota State College, Brookings, S. Dak.

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A Big Swarm and Good Colony

I am sending a picture where I am hiving the largest swarm of bees I ever saw from one 8-frame hive. I got 6 gallons of extracted honey, 28 pound-boxes fairly well filled, and this big swarm, although the honey-flow was not very good last year.

T. M. GULICK.

Edgerton, Minn., Jan. 8.

A BIG SWARM OF BEES.

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Tests for Wax-Adulteration

Paraffin and ceresin, I believe, are the main adulterants. If the beeswax is pure, and if you chew a sample you will find it will all granulate in your mouth. If there is any great amount of paraffin along with it, it will be pasty and act like gum in your mouth. It is a simple test, which I am assured by manufacturers and others, will tell if there is any perceptible amount of paraffin with it. Ceresin, I understand, is the main adulterant used in comb foundation. They tell me as good a test as you can make for that—I have never tried it myself—is to take a hot iron and drop a sample of what you know to be pure beeswax on it, and notice the smell and odor of the smoke; and then take your suspected sample, and if there is a small percentage of ceresin in it you can tell it right away—a very fatty, pungent smoke will come from it.—J. L. BYER, in *Canadian Bee Journal.*

Short Course in Bee-Keeping

Circulars are now being distributed for the two weeks' course in bee-keeping which comes May 25th to June 8th, at the Massachusetts Agricultural College.

The practical field-work and demonstrations in the handling of bees will be given by Dr. Burton N. Gates, of Washington, D. C.

Crops for honey bees will be treated by Dr. William P. Brooks.

Bees, and their relation to the pollenation of plants, will be treated by Dr. George E. Stone.

The origin and evolution of the honey-bee, by Dr. Henry T. Fernald.

Bee-Keepers' supplies, by Dr. James B. Paige.

No tuition is charged in the course. Board and room can be secured at reasonable rates.

A circular and registration card can be secured by writing the Director of Short Course, W. D. Hurd, of Amherst. Mass.

It is encouraging when agricultural colleges are turning at least a little of their attention to the study of bees and their value as aids to profitable agriculture and the sweet food-supply of the world. May the good work go on, and may many young men and women take advantage of the opportunity to study the honey-bee and its work.

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National Biscuit Co. and Honey

The last of March we had a very interesting interview with Mr. H. J. Evans, head of the purchasing department of the great National Biscuit Company, here in Chicago. Naturally the conversation turned on honey, and some surprising statements were made.

In the first place, the Company uses about 125 carloads of honey annually! A carload being from 13 to 15 tons, it would make about 3,600,000 pounds. That surely is some sweetness. The larger portion of the honey they purchase comes from the Western part of this country, although they do get quite a little from the East, the South, and from Cuba. At the end of each week a report is made to headquarters from all the branches of the Company, and it was found on Saturday, March 26, 1910, that there was on hand a total of nearly 2,000,000 pounds of honey. So it will be seen that they seem to have no difficulty in keeping up their supply, even if there was a shortage in the crop in some places last year.

It is generally supposed that a gallon of extracted honey weighs 12 pounds. Mr. Evans said they never had any honey, from anywhere, that weighed as much as 12 pounds to the gallon. The nearest was 11 pounds 14½ ounces, and that was honey from Arizona and California. He thought the average weight would possibly be not over 11 pounds and 10 ounces.

I asked about honey adulteration. Mr. Evans said there is no such thing, and has not been so far as his Company's experience goes, especially in a wholesale way, as they buy honey. The nearest they ever came to getting adulterated honey, was in a small lot they purchased some years ago from an Iowa bee-keeper. In testing a sample from the lot, their chemist found cane-sugar in it. On further investigation, it was learned that sugar had been fed the bees in the spring to tide them over till the flowers should yield, and some of it must have been carried up into the extracting combs. That was the only experience the National Biscuit Company ever had with adulterated honey. That certainly speaks volumes for the honesty of honey-producers generally.

The National Biscuit Company never uses any shipment of honey without first submitting a sample to their chemist. In the case of a carload of honey, they select and test 10 samples taken from various parts of the car. They will not use any adulterated honey at all. It must be absolutely pure.

In their bakings, the light amber honeys seem to hold out best as to retained flavors, although alfalfa, sage, and many other kinds of honey are good. They find that even the best honey-dew honey is quite inferior for their use. Practically all the honey that comes from the Hawaiian Islands is honey-dew. They have had it offered to them as low as 3 cents a pound.

Their bakings which carry the name "honey" at all, such as "Honey Wafers," etc., contain *only* honey as a sweetener. If there is the least bit of any other sweet used in connection with the honey, the word "honey" is not used in the name under which it is retailed.

As most of our readers know, we were for some years in the honey-business, and handled from 3 to 5 carloads a year, bottling the larger part of it. But when we talked with the man who buys 125 carloads *every year*, we felt that really we had never been in the honey-business at all. However, we wouldn't take a good deal for the honey experience we gained in those years when we *tried* to sweeten all Chicago and many other places as well. The only way to learn some things is *to do them*. Theory is all right, but usually the man who *knows* is the one who has been "through the mill" himself. Mr. Evans is that kind of a man. We appreciated the free and frank manner in which he talked, and we believe our readers will be interested in what we have here briefly given from the conversation we had with the head of one of the most important departments of the well known National Biscuit Company.

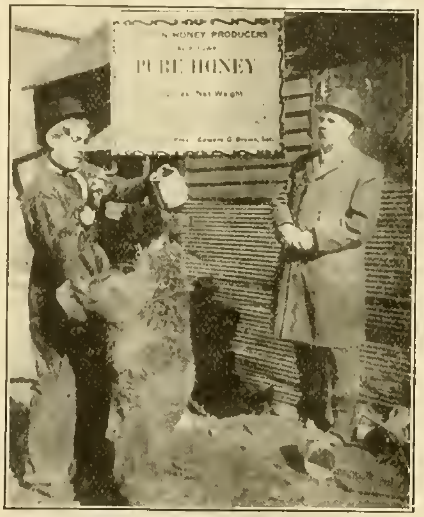
Clarifying Wax With Acid

Some object to the use of sulphuric acid at any time for clarifying wax, and certainly it should be used only in case of very dark wax, if at all. When used at all, the danger is that too much will be used. O. L. Hershiser thinks a teaspoonful to a gallon of wax should never be exceeded. He says in the Canadian Bee Journal:

> Suppose you have a quantity of wax that it is desired to treat with acid. Melt the wax in about one-quarter its volume of clean water. When hot enough to remain melted without commencing to congeal on the surface for the space of about 10 minutes, remove from the fire. Provide a cooking spoon with a long handle and into it pour sulphuric acid in the quantity of not to exceed a half-teaspoonful to a gallon of wax. Pour the acid from the spoon into the wax without diluting, and at the same time commence stirring vigorously and keep it up for 4 or 5 minutes. When agitation of the wax due to stirring has ceased, if there is any scum on the service, skim it off and set the vessel away to cool. If you will wrap the vessel containing the wax in papers or cloths or set it in a slightly larger vessel to prevent the rapid radiation of heat, and cover with a lid having a hole one or two inches in diameter in the center to cause it to cool more rapidly at that point it will be more likely to cool in a solid cake.
>
> Diluting the acid with water before introducing into the wax has been tried, but the results were unsatisfactory; the desired effect in bringing out the yellow color was not obtained.

A Pet Bear that Likes Honey

While I was at Grand Island, Nebr., I saw a pet bear and gave it some honey, and it was so anxious to get it, it would whine and reach for it, and growl, etc. So I got a photographer to take a snap-shot as he was pulling the owner's arm down to take some from his fingers. It is a rather poor picture, but it shows him while I was watching his actions, and listening to his roaring whine for the honey.



BEAR WHINING FOR HONEY.

Salix, Iowa. THOS. CHANTRY.

Michigan Bee-Keepers

These people certainly are hustlers. Recently they have been making a "Whirl-Wind Campaign for New Members." They issued a large 4-page circular giving a little history of what the Michigan State Bee-Keepers' Association is trying to do for its members. Secretary E. B. Tyrrell, of 230 Woodland Ave., Detroit, is a wide-awake officer, who is leading in the effort to build up the largest, and the strongest, and the most helpful State bee-keepers' association in this country. Its dues are $1.00 a year, and if 50 cents more is added (making $1.50) any bee-keeper will become a member of the National as well as the Michigan Association.

For 6 years the Michigan Bee-Keepers' Association has published a booklet giving the names and addresses of its members, and stating the kind of honey they had for sale. This booklet has been the means of selling tons of honey for the membership, and finding many new markets. It seems to be working out the practical solution of the marketing problem, and has met with gratifying results so far.

Keep an eye on that Michigan Association, and those hustling "Michiganders." They know how to do things.

Bees in Switzerland and Russia

The following paragraphs are taken from the Daily Consular and Trade Reports for Feb. 28, 1910. Mr. Frank Benton edits these reports—in fact, dresses them up a good deal from their original "amateurish" form. For more than a year he has been editing consular reports. Here is what was recently reported from Switzerland and from Russia, relating to bee-keeping:

UTILIZING BEE-PASTURAGE OF MOUNTAIN AREAS IN SWITZERLAND.

Consul-General R. E. Mansfield, of Zurich, writes interestingly of the development which the cultivation of bees has reached in the mountain republic of central Europe. He says:

Much of the 16,000 square miles of territory comprising Switzerland is so mountainous and stony that when available for any purpose it can only be for the pasturage of animals. Yet, so carefully are all of the natural resources conserved and exploited that the country is one of the most prosperous in the world, and the Swiss people are as contented as they are industrious and frugal.

An attractive feature of every Swiss landscape in spring and summer is the beauty and variety of wild flowers growing in profusion on hillsides and lower mountain ranges, while the valleys resemble beautiful mosaics in the rich and varied tints of flowers that cluster in the greensward. This wealth of blossom, in addition to beautifying the landscape, is turned by the thrifty Swiss into profit. The flora of Switzerland possesses qualities that produce delicious honey and thousands of colonies of bees may be seen in the country, being utilized by the people to increase the food-supply and commercial products; in fact, the production of honey and wax constitutes an industry of considerable importance to the Confederation, as is shown by statistics furnished by the Swiss Society of Apiculturists.

It is estimated that there are 250,000 colonies of bees in the country, each of which produces 40 pounds of honey during the season, a total of 10,000,000 pounds a year. The average price of Swiss honey for the year 1909, was 25 cents per pound, giving the year's product a total value of $2,500,000. The statistics furnished by the Society of Apiculturists show that the highest average production for 1909 was in the Canton of Lucerne, where 8000 colonies of bees produced 424,000 pounds of honey, an average of 53 pounds to the colony. The next highest average, 42 pounds, was in the Canton of Berne, where 9600 colonies produced 403,200 pounds of honey. The territory comprising the Cantons of Lucerne and Berne is rich in the flora especially suited to honey-production.

The honey crop of Switzerland, valued at $2,500,000, is largely profit to those engaged in the industry, nature producing the raw material.

BEE-INDUSTRY REVIVING UNDER MODERN METHODS IN RUSSIA.

Consul John H. Grout, of Odessa, writes as follows of the conditions under which the production of wax and honey are found to be profitable in the southern part of the Russian Empire:

Apiculture has for many centuries played an important part in Russia. When sugar was an imported article, and its price as compared with other articles of food ruled high, being sometimes even more than tenfold that of fresh beef, honey, the only natural sweet of local production, was of much importance, and nearly every large household had its own apiary, and honey seems to have been generally plentiful. It was even an article of export, and still more so beeswax, which the people in those days had not learned to adulterate nor found substitutes for.

With the advent of cheap and good sugar less attention was given to bee-culture, and a half century ago the industry seemed to be declining. Famous physicians pointed out the great value of honey as a remedy in certain maladies, while equally great botanists drew the attention of farmers and fruit-growers to the necessity of bees for the proper pollination of many fruit and field crops. It was shown that the decline of apiculture was not the direct and inevitable consequence of the reduction in the area of forests and the resultant absence of proper shelter for bees, but that, with good care and judicious selection of varieties of bees, more energetic breeds might be obtained.

Sugar Not a Good Substitute for Honey

It was found that sugar was not a real substitute for honey, especially as food for the aged, and still less for children, so that even dear honey had a justification alongside cheap sugar. The industry began to revive, and while in some parts there is still a continuing decrease in the production of honey, there is a decided increase in others, especially in some places where there is little forest shelter. Even a considerable reduction in the extent of meadows and a corresponding increase in the sown fields does not prevent a successful further development of apiculture, provided proper attention is devoted to it, and provided there are in the neighborhood such trees as the locust (Robinia pseudoacacia, wild olive (Elaeagnus oleaster, the maples, lindens, etc. Among Russian field crops there are also some invaluable as honey-yielders, such as buckwheat, the clovers, rape, flax, etc. If, to tide over particularly lean periods, small plots are sown with phacelia or some other honey-plant, then with moderate attention bee-culture can be made a paying industry. It is found that, without detriment to their health, bees may be fed for winter stores, or to carry them through a dearth of honey with cheaper sweets than honey.

A report from Bessarabia states that in the year 1860 the percentage of the whole area devoted to agriculture was 37.8; in 1881 it was 44.6; and in 1887 it was 61, a steady growth unfavorable to apiculture. There was also a great reduction in the area of buckwheat fields, the acreage in 1900 having been 2741; in 1903, 3634; 1904, 1947; 1905, 887; and 1906, 403. This shows a considerable reduction in one if the principal food-plants of the bees, yet the following interesting data as to the honey and wax produced are reported:

Year	No. apiaries.	No. colonies.	Tons honey.	Tons wax.
1892..........	4,082	84,241	123	40
1900..........	2,977	42,351	120	32
1901..........	3,590	53,677	214	51
1905..........	3,418	50,220	253	60

Thus, there was a decided increase in the output in the face of less favorable circumstances, and with better instruction this can be still further extended. Some other provinces are without doubt more favorably situated than Bessarabia, although the honey from this province is appreciated, and sells at higher prices than some other grades.

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New Jersey's Governor and the Vetoed Foul Brood Bill

We have received the following from Mr. Albert G. Hann, Secretary of the New Jersey Bee-Keepers' Association:

> The bee-keepers of New Jersey, through their State Association, succeeded in getting a Foul Brood Bill passed; but when it came before the Governor for his approval, he vetoed it on April 12th. We do not know his reasons exactly, but understand he considered it too drastic.
>
> Our Bill was modeled after the one recommended by Dr. E. F. Phillips, of the Department of Agriculture, and was considered a good one by all who saw it. We think it was rather from a lack of understanding on the part of the Governor, than from anything else. We spent all our efforts to get the Bill, on the Assemblymen and Senators, thinking the Governor would surely approve.
>
> To say that we are greatly disappointed is expressing it mildly. After working so hard to get the Bill passed, and then have it stabbed by the Governor was the least of our expectations.
>
> But, then, there is no use to fret. We will simply have to stay sweet and try again. I suppose we will have to frame a Bill to meet the Governor's objection, and try again next winter. This is individually our opinion, and will have to be approved by the Association.
>
> In the meantime, we would like to have more bee-keepers join the Association. Dues are 50 cents a year. We know of some bee-keepers who have held aloof from joining the Association because they thought we could never get a Bill passed. The stronger the Association the stronger appeal we can make next winter.
>
> Albert G. Hann, *Sec'y-Treas.*
>
> Pittstown, N. J.

We regret very much that New Jersey's Governor was not seen in advance by some leading bee-keeper, who could have explained to him the need of just the kind of a Foul Brood Law that the bee-keepers had succeeded in having passed, and which should have had his hearty approval. It is the same experience that Missouri bee-keepers had some years ago. It is discouraging, but success will finally come if bee-keepers do not give up. Persistency does wonders, sometimes. Before the next session of the legislature, let all New Jersey bee-keepers get into their State organization, so as to be ready to win next time. Numbers mean much in a thing of this kind.

We congratulate New Jersey bee-keepers on succeeding in securing the passage of the law, even if the Governor was not sufficiently informed on the subject to give it his approval.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Honey Preserving Fresh Butter

Wash the butter thoroughly in several changes of water, slightly salted and boiled for about 5 minutes. The hands of the operator should be thoroughly washed and then rinsed in water previously boiled. The butter is then well worked up with the hands, and after being well kneaded there is no longer any butter-milk left. Put the butter into glass jars, the best for the purpose being those holding 2 pounds. These jars must first be well washed in boiling water, made thoroughly clean and then dried.

When ready for the butter, turn over the jar and burn in it a sulphur match, then put in the butter, pressing it well down. This done, pour on the top, to the depth of about one-third of an inch, thoroughly ripened honey just about to granulate, and screw on the lid. If the operation is carried on exactly as directed above, the butter will keep well right through the winter.

Scotland. D. M. Macdonald.

It is quite a compliment to the Sisters' department that so distinguished an apicultural writer as Mr. D. M. Macdonald, from far off Scotland, should favor us with the foregoing. Mr. Macdonald may be assured that the compliment is greatly appreciated. On the face of it, one can hardly doubt the good effect of honey thus used in preserving butter. There will be plenty of opportuhity to try it the coming summer.

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Why These Things Are So

They are so because the source from which bees gather honey is the same today as it was, not only "20 and 30 years ago," but since the beginning—free. The poultryman's product comes from grain, etc.; said grain costs him more today than it did 20 or 30 years ago; the grain comes from land that then cost him 5 or 10 cents an acre, and that now costs him $5 to $10, and way up to $100 or more.

The dairyman pays more for his milch cows and their keep than formerly, and so has to charge more for his butter and milk. Hogs cannot produce 5-cent lard and eat the high-priced corn grown on the high-priced land. What, may I ask, do you have to pay for your bees' pasturage? It costs no more than it did 20 or 30 years ago—it's free. See? If you had to pay so much for every tree and plant that the bees worked on, wouldn't you have to ask so much for the honey gathered? As you pay out nothing for the source, you ask only the sum which recompenses you for your time and labor and other expenses.

Prices have risen on queens and nuclei because the source of them also has risen. Pure-bred Carniolans or Italians are worth more today than the black bee, and the black bee has not any more value than it had since the beginning—at least I think that is correct.

As to the "slump," the bee-men are responsible, in that they should hold their honey rather than sell it for less than it should bring. Because farm products take a slump, it doesn't stand to reason that books (or anything else) should, too. Then why honey?

Now take cotton, and such like. Has not practically one man in Wall Street got possession of it? Wheat, etc., goes to Wall Street first, and is given to the miller's at the price they choose to let it go for. The miller sells it to the wholesaler at his price; then the wholesaler sells it to the retailer at his price, and then the consumer pays the retailer what he in turn asks for it. It passes through 6 hands, and, mind you, the seed it came from was high—grown upon high land.

It's a wonder to me, flour is as cheap as it is, 6 having to make a living out of it before the consumer receives it. Honey doesn't pass through so many hands; in most cases the producer sells to the consumer. If every bee-man had to have his honey worked over by some manufactory, and sold again and again to others, of course it would rise.

And now another reason why: Honey is not an absolute necessity. People *can* live without it, and when it gets out of their reach they will not buy it. If bacon went to 60 or 70 cents a pound people would still buy it. If flour and meal went to $6 per 100 pounds, wouldn't they still *have* to buy it, some way or other?

It is true that we have customers who would buy honey if it soared to $1 a pound; but they are few and far between, and very rich.

The foregoing has always been my idea upon this subject, and it is one that we have thought much about.

Eola, Tex. (Mrs.) M. E. Pruitt.

Mr. Doolittle raised the question, "Why are these things so?" without attempting to give any answer to the question. It has remained for a sister to give one of the first answers. It will be interestfng to know whether others agree with her.

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Beginning With Bees

I do not know anything about bees, but I would like to learn, and in February I bought 2 colonies of bees from a man who was moving away. The bees were in his cellar and seemed to be all right, so I gave him $15 for the 2 colonies and 3 extra hives, etc., and left them in the cellar. When this warm weather came, I went to look at my bees, and found them dead. I thought them all dead, and so did the father of the man I bought them of, who has kept bees for many years, and in whose cellar they were. Well, we took them outside, pulled the hives in pieces, and poured the bees out upon the ground, and in about 15 or 20 minutes I noticed some of them moving, and called the man's attention to it. We watched them awhile, and in half an hour there was about a pint of live bees. We put them back into the hives and fed them some honey and water. One colony, which the man said was the old bees, had a little honey; but the other had none—not a bit. The combs were as dry as if they never had honey in them. We can find no queen-bee in either hive. What shall I do? Shall I let them alone, or shall I get a queen, and put them all together in one hive? Or shall I keep on feeding? What do you advise?

We are living in Barron Co., Wis., in cut-over timber, and I think it will be a good location for bees. I am anxious to keep a few. MRS., J. BROSSARD.
Rice Lake, Wis.

Although you have not found a queen, it is by no means certain that there is no queen there. Even the most experienced sometimes fail to find a queen. Look and see whether there is any brood in the hive; if not, you may conclude the bees are queenless, in which case it will be well to furnish a queen to the united lot of bees. By this time the bees ought to get along without any feeding.

Honey for Hens

Here is something for the sisters who are interested in the biddies. It is taken from Schweizerische Bienenzeitung:

In all cases of disease among my hens, especially diseases of a catarrhal form, I have used a strong solution of honey in warm water, and have found no medicine to compare with it. It is wonderful how quickly the creatures recover with this cure, which consists in stirring honey (one or more tablespoonfuls, according to the number of hens) into the drinking-vessel in the morning, the honey being previously dissolved in hot water. In severe cases I give each hen daily a teaspoonful of clear honey.

It is also advisable to allow well hens this luxury as a preventive of disease.

A Correction—Other Items

There was a slight mistake in my article in March, 1910, pages 72 and 73, which I would like to have corrected, which says, "and all sells as extracted honey at 10 cents a pound." It should have been, "and all sells as comb honey at 10 cents a pound"—that is, when the honey is dark. When it is white honey, of course it sells for 12½ and 15 cents.

By the way, we have sold about 1000 pounds of that dark honey this spring; this dark honey was gathered from live-oak balls. It was honey that the bees had over from their winter stores.

In looking over them in February, we found 2 colonies queenless out of 120. One of them we saved, but the other was too far gone, so we increased one, and our rows are not broken. Both cases were the result of neglect on our part.

I would like to tell you some more of our experiences, etc., but I'm afraid I shall wear my welcome out.

(MRS.) M. E. PRUITT.
Eola, Tex., March 31.

Have no fear about wearing out your welcome. You will always be more than welcome.

Please accept sincere thanks for the private word of appreciation accompanying your article. Such words warm the heart, and make us feel that we are indeed sisters.

Sketches of Beedomites

Dr. J. P. H. Brown

Mr. J. L. Patterson, of Augusta, Ga., writing us recently informed us of the death of Dr. J. P. H. Brown, of Augusta, Ga., Aug. 24, 1909. He was in his 78th year, and it seems death had been expected for some time on account of his feeble condition.

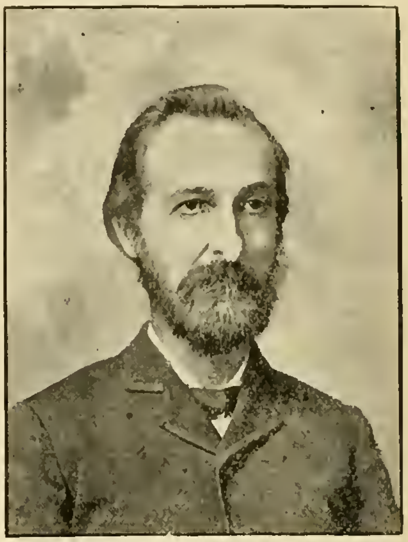
Dr. Brown came to Augusta some 40 years ago from Atlanta, where he had been a practicing dentist. He was also interested in agricultural pursuits, and was one of the old organizers of the agricultural clubs and agricultural movements. Dr. Brown was looked upon as one of the leaders in his part of the country.

In the American Bee Journal of Dec. 7, 1893, we published the following brief sketch of Dr. Brown:

> "Dr. Brown was born Oct. 15, 1831, and was reared on a farm in Carroll Co., Md. Like many other country boys, he worked in summer and went to a common country school in winter until he was 16 years of age, when he attended an academy in his native town. He afterwards took a course in natural science and mathematics at the Western Liberal Institute in Marietta, Ohio.
>
> "After leaving the Institute he studied medicine, but mechanism being a ruling passion, he took up dentistry as a medical specialty. He migrated to Georgia in 1859, and his services were so much appreciated by the Confederate Government that he was detailed to manufacture dentists' gold-foil and other specialties for the dental profession.
>
> "Dr. Brown's commencement as a bee-keeper dates back to childhood. His father kept bees in the old box-hives, and his earliest recollection is the cry of 'Bees swarming!' and the unusual thumping on a tin-pan to settle them.
>
> "In 1870 he adopted the movable-frame hive and introduced into his apiary the Italian bee. In 1874 he began to import queens direct from Italy, and to breed them. Since then he has been a large breeder, and has shipped bees and queens to all parts of the United States, Canada, Cuba and Mexico.
>
> "As a queen-breeder Dr. Brown has worked for a better bee; and to secure this object he has brought to bear all the science, skill and detail that he was possessed of. He also runs a factory for the manufacture of hives and supplies for the apiary."

Dr. Brown is survived by no near relative except his wife, Mrs. Mary Brown. His only child died several years ago. He was a popular citizen of his locality, and was held in very high esteem not only by those who knew him where he lived, but also by the dental fraternity, who considered him "one of the most prominent practitioners of Georgia in days past, and who did the most active work for the advancement of his profession in his time; who having turned aside from the prevailing selfish idea of 'making money,' has left a public record as evidence of special work in uplifting the profession."

Some years ago Dr. Brown conducted the department of "Southern Beedom" for the American Bee Journal, which department is now in charge of Mr. Louis H. Scholl, of Texas.


DR. J. P. H. BROWN.

One by one the old bee-keepers are passing away. Only a few of those who lived when the Langstroth hive was invented are still with us. Many of the present generation know but little of the struggles made by our fathers in the bee-keeping line. We have all entered into their labors, and are reaping the result of their efforts and devotion to the cause of bee-keeping. Only a few more years and not one of the faithful old-timers will be left to tell the story of bee-keeping in its infancy in this country. Almost without exception the apiarian leaders we have personally known, or read of, have been splendid men—in fact, some of them have been splendid women. It is an inspiration to know not only that, but that their successors *deserve* the success and honors that have come to them during the passing years.

Thomas William Cowan and His Work

That does not mean that a full account of all our distinguished contemporary has done for British bee-keepers and bee-keeping is to be set down in order here, which would take too many pages. It is merely to say that a man who has been so actively engaged, and for so many years, begins now wisely to think of taking things just a bit less strenuously. At a late meeting of the British Bee-Keepers' Association he offered his resignation as its Chairman, after having filled that important position for 36 consecutive years. This was felt to be nothing short of a calamity, and instead of accepting his resignation the Association begged that he would take further time for consideration, with the assurance that his position should be made as easy as possible.

Since the death of Mr. W. B. Carr, who so ably assisted Mr. Cowan, the burden of editing the British Bee Journal has been entirely upon the shoulders of Mr. Cowan as editor-in-chief, except as he has wisely brought into training a man who promises well as his successor, Mr. W. Herrod. The American Bee Journal extends to Mr. Herrod its heartiest good wishes, with the hope that between the two Bee Journals—British and American—there shall always remain the same cordial relations that have been in the past.

To Mr. Cowan, not as a British bee-keeper, but as one who belongs to the whole world, are hereby extended congratulations upon the life of usefulness he has hitherto been permitted to enjoy, with the earnest hope that his last days may be his best.

Canadian Beedom

Conducted by J. L. Byer, Mount Joy, Ontario, Canada.

Foul Brood and the Inspectors

At this writing (April 18) the names of the different apiary inspectors for the current year have not yet been made public. The appropriation for the work has been increased, and the number of inspectors increased from 14 to 16. A few years ago there was much discussion in the bee-papers as to whether foul brood is on the increase or not, and it seems that the action of the Department at the present time should be a good answer to the question. While not saying that the disease is on the increase at present, yet all may rest assured that we have all we want of the article, and might probably spare seed to other countries that may be in need of some samples. One favorable feature about the situation is that an aggressive policy of education is being advanced, and while far too many are not reached even by this means, yet enough are influenced to be a powerful factor in helping to eradicate the disease.

Early Spring—Prospects Good

In common, I suppose, with most of the country this year, we are, in our section, having a very early season—fully a month or more earlier than last year. Winter jumped abruptly into summer, almost, early in March, and with slight interruptions of cold weather has so continued right up to date of writing (April 18). Last year the apple blossoms were still in bloom during the latter week in May, while this season, if the warm weather should continue, the blossoms will show in another week or 10 days—the earliest, by all odds, that I have any record of since I have been keeping bees.

While little has come into the hives as yet, still a lot of warm weather with some pollen being gathered, has caused the bees to breed up at a great pace, and as a consequence the stores are disappearing like magic. If the weather should be cold through willow and apple blossom, it will be a case of feed the bees or let them starve. Clover is in fine shape, and barring some setbacks that may come in the way of heavy frosts later on, prospects are good.

In the fruit-raising sections of the country, the situation is regarded as somewhat critical, as the blossoms are abnormally advanced for the time of the year, and as we usually get heavy frosts after this date, naturally the fruit-men are much concerned as to the weather conditions of the next 3 weeks. To a certain extent the same thing applies to the bee-keepers, although, by feeding, the matter can be helped out somewhat even if the fruit-blossoms should freeze, as it is not at all likely that the alsike would be injured by a freeze to any great extent. However, we have had a wonderful spring so far, and perhaps a like condition may prevail all through the balance of the season. In looking back over my past years of bee-keeping, I find that, as a rule, my best years have been after a late spring. Here's hoping that this year may be an exception to the rule.

Breeding from the Best

To the writer's mind, there is no question but what there is a good deal of truth in the surmise (page 118) relative to the different races of bees being popular in different countries, simply because the different countries have improved certain races to the exclusion of others. As pointed out, in Switzerland the German or black bees are preferred to the Italians, and consequently the latter race has been neglected, while, on the other hand, the reverse is true with a vengeance on this continent.

For the past 3 years I have commented on the fact that in my yards during the said period, the colony that has headed all each spring, is one bought from a farmer bee-keeper who never bought an Italian queen in his life, and to all appearances the bees are of the genuine German race, in so far, at least, as color goes. There the comparison ends, however, as the colony is very quiet, without a trace of the nervous disposition so common to the black bees. This spring again, this colony is very strong and ready for a super any time that a flow of honey comes along. At this date (April 15) the bees are fanning at the entrance although the weather is too cool for flight, and whenever it warms up a bit, they will cluster outside.

A peculiar feature of this colony is that this condition keeps up right through the season without declining in strength as is generally the case with colonies abnormally strong so early in the spring. For the past 3 years this colony has stored a super full of honey from the willows and fruit-bloom, and, by the looks of things at present, this condition is apt to be duplicated again this season. In all this time the colony has never offered to swarm, although the bees have been crowded for room at different times.

Is it at all unreasonable to suppose that with proper care a strain of bees with these good traits could be propagated that would have all the virtues of the Italians with perhaps less of their faults? Certain it is that if I could have an apiary like the colony mentioned, I would not exchange it for any Italian stock that I have ever handled, and we have had a few from most of the breeders in America.

As to one race being more immune to foul brood than another, it seems a fact that the Italians are more capable of resisting the ravages of black brood than are the other races; but in all sincerity it certainly appeals to the writer to be a joke, when it is claimed that Italians are less subject to the old-time foul brood than are the other races. Does any one, I wonder, really entertain such a view? As a matter of fact, in my limited inspection work, I have generally found more foul brood among Italian colonies than among other bees, not that they are more subject to the disease at all, but because, as a rule, Italians are inveterate robbers as compared with other races, and are always nosing around for mischief, consequently get into trouble oftener, as is bound to be the case with bees or members of the genus homo, for that matter, if they stray away from home too often in other people's premises.

Not Byer's Bear

What's the joke, Mr. Editor, on page 134, about J. L. Byer and the bear? Surely a case of mistaken identity in some way, as back in the 70's the writer was not concerned about bears, weather prophecies, or anything else for that matter, as it was late in that decade that I first saw the light of day. When I read the item it caused me to scratch my head a bit in a meditative mood, and wonder if I was a second Rip Van Winkle. I suspect that my name has in some way got mixed with that of an old friend still living who has always been a great sport and hunter. As the names are not very similar, it is up to you and Mr. Wismer for an explanation.—[We shall have to refer this to Mr. Wismer. It must be a mistake.—Editor.]

Early Stimulative Feeding of Bees

By the way, I wonder how many are practicing early stimulating this spring? Please don't mention the subject to me, but kindly, instead, hand me out a recipe to keep down brood-rearing without letting the bees starve. Not a colony died in the winter, and so far I have found only 2 percent queenless, with about that percentage weak. Dozens of colonies in 10 and 12 frame hives (Jumbo frames) have brood in from 6 to 8 frames, and are boiling over with bees. Lots of these colonies had 25 pounds of stores, at the least, a few weeks ago, and now some of them have nearer that number of ounces instead. Is it any wonder that the thought of stimulating gives me a pain, and that instead I am thinking of dipping into my pocket, not to stimulate, but to avoid starvation if the weather should be bad during willow and fruit bloom?

One favorable factor in the situation is that the bees are so strong that they will be able to take advantage of every bit of weather that allows them to fly when any nectar may be available. With two seasons in succession very late and generally considered bad for brood-rearing, yet in both cases it was necessary to super most of the bees during fruit-bloom to hold down swarming, and now with a spring of the other extreme, and bees in the same shape—really, I am afraid that I am done with all spring stimulating (previous to a possible dearth between fruit-bloom and clover) for the future, and will leave that work to the other fellow, the writer being contented, or rather (shall I say?) *discontented*, to buy sugar only to avoid starvation, as I am rather expecting to do in a week or so.

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List of Ontario Apiary Inspectors for 1910

[Since another item in this department was put in type, Mr. Byer sent in the following :—Editor.]

1. J. S. Schrank, Port Elgin—Bruce and Huron counties.
2. D. Chalmers, Poole Waterloo and Perth.
3. Wm. Idle, Clarksburg—Wellington and Grey.
4. W. A. Chrysler, Chatham—Lambton, Kent and Essex.
5. John Newton, Thamesford—Middlesex and Elgin.
6. Jas. Armstrong, Cheapside—Norfolk, Haldimand and Welland.
7. W. Bayless, Grand View—Oxford and Brant.
8. Alex Robertson, Waterdown—Wentworth and Lincoln.
9. Arthur Adamson, Erindale—Halton, Peel and Dufferin.
10. Hy. Johnson, Craighurst—Simcoe and Muskoka.
11. J. L. Byer, Mount Joy—Ontario, York, Victoria and Durham.
12. W. Scott, Wooler — Peterboro, Northumberland, Hastings and Prince Edward.
13. J. B. Checkley, Linden Bank—Lennox and Addington, Frontenac and Leeds.
14. A. A. Ferrier, Renfrew—Renfrew, Lanark and Carleton.
15. Alex Dickson, Lancaster—Russell, Prescott and Glengarry.
16. Homer Burke, Tayside — Grenville, Dundas and Stormont.

Convention Proceedings

Southeast Minnesota and Western Wisconsin Convention

The following address was given by Pres. W. K. Bates:

PRES. BATES' ADDRESS.

Again we are gathered in our annual meeting, and so far as I know death has not taken any of our membership.

The last year was not one of the best for our pursuit, but I think the territory covered by our Association had as good a honey harvest as, if not better than, some of our sister States and locations. Honey-dew was prevalent to a greater extent than usual, and tended to lower the price and quality of honey, and very little surplus honey was gathered after July 20; but, so far as I can learn, bees generally went into winter quarters with plenty of stores.

I think the time has arrived that we should study more to improve our strains of bees, which can only be done by improving our queens and strains of bees that give us the best results, and this cannot be attained by the usual way of keeping bees, but only by applying the best methods will we be able to hold our own; and prices of our products do not increase with the increase of prices of the articles we use, such as lumber for hives, supers, sections, etc.

The marketing of honey is a subect for all of us to study in its different phases.

The reports we get from the Western fields seem to be that bee-diseases are on the increase. European and American foul brood are being found in the West, and may invade our locality any year, and our members should be alert and on the look-out for any outbreaks of these and other diseases.

I have to report to you at this time the death of the Minnesota State Foul Brood Inspector, Wm. Russell, at Minneapolis, in May, 1909, who was with us at our last annual meeting. Gov. Johnson appointed Mr. Russell to succeed himself for the current year, and at his death appointed Mr. Hamlin V. Poore, of Bird Island, to the office, who, as far as I know, has "made good" as his successor.

I would recommend that our rates for membership be raised so we can gain a membership in the National Bee-Keepers' Association as a body. I have had some correspondence with Mr. N. E. France, the National Manager, and he desires us to become members. A rate of 60 or 75 cents would pay dues in both our own and the National Association.

We must all work for the National meeting in Minneapolis, in 1912, which is the probable place in that year.

I am glad to report that the two Minnesota State Bee-Keepers' societies merged into one large association in January, and I would recommend that you send a delegate, or delegates, to their next annual meeting.

Few people realize the magnitude, importance and possibilities of the present bee-keeping industry in the United States, and as it has reached the annual sum of $20,000,000 in honey, and $2,000,000 or more in beeswax, it seems to me we all should see that in the census about to be taken, correct reports should be given so that we may have a better showing than we had in the 1900 census reports; for in that census the average number of colonies to the farm in the United States was less than 6, and valued at $14.40—a very small investment, indeed.

Your committee appointed at the last annual meeting on revision of our constitution and by-laws, held a meeting at Minnesota City, in January, and will report the results of their work to this meeting at the proper time, for your action on the same.

W. K. BATES.

Mrs. E. Monette, Jr., offered the following remarks, which were of interest:

MONETTE NON-SWARMING METHOD.

Since there have been many inquiries regarding our brother, C. Davenport Monette's non-swarming method, and especially the similarity of his method and that of Dr. Jones, I wish to make a few remarks on the subject.

At the time Dr. Jones published his book, he wrote us, sending his book, and asking us if, in our opinion, his method might not have been that of C. Davenport. On reading his book, we thought it might be possible; but about two weeks ago we received, through the courtesy of A. C. Gilbert, of New York, two clippings taken from the American Bee Journal, dated March, 1906, and July, 1906. In these C. Davenport says his method or operation "requires 3 or 4 minutes to each colony, though I have frequently done it in less than 2 minutes; then the next day, or any time within 15 days, another operation requiring less time. There is no searching for queens, no jumping of hives around, no possibility of any eggs or brood being chilled or lost, no possibility of after-swarms."

In the other article, "There is no cutting of queen-cells. The frames are not removed."

Now it seems to me, there can be no similarity in the two methods, since by Dr. Jones' method the frames have to be removed and part of the brood destroyed. He also says the operation can be repeated the next day, or any time within 15 days.

Also, at the time of C. Davenport Monette's death, June 13th, many colonies were strong enough to swarm, and some did swarm in a day or two. Although at that time neither Mr. Monette nor I knew anything about bees, and had immediately to study and learn, we can recall no instance of seeing any brood carried out, or showing signs of being uncapped, on examination; and there were as many colonies as strong, and stronger, that did not swarm, as those that did. Since reading these articles relating to his method, we have thought that perhaps these colonies had been so treated.

That he did have some way of preventing swarming, I am positive, as he often left home in the height of the swarming season for a day or two, and himself said that swarming did not trouble him any more. His articles sent us by Gleanings and those in the American Bee Journal, sent by friends, are all we have to go by. The house and entire contents were burned, and his brothers were not interested in bees at the time, consequently they did not know a queen from a drone. Neither have we been able to find any one in the neighborhood who had been in our brother's confidence.

MRS. E. MONETTE.

[This probably will be the final word on the Monette non-swarming method. It seems to have perished with him, when he was burned to death, with the house and contents.—Editor.]

Patronize Our Advertisers

We have been endeavoring to increase the patronage of our advertising columns. But nothing else would help us so much to do this as would a liberal patronage of our present advertisers on the part of our subscribers. So please, always, mention that you saw the advertisement in the American Bee Journal whenever you write to advertisers. This will help both of us and the advertisers. If it were not for the advertising patronage we have, we couldn't possibly furnish the American Bee Journal at $1.00 a year. So we hope that all will aid us in this matter by complying with our request to mention having seen their advertisement in the American Bee Journal, when writing to any of our advertisers.

Don't forget that we now have a "Want and Exchange" column that is a good place in which to make your offers also. If you have anything that you think our readers would like to buy, there is no better place in which to advertise than in the Am. Bee Jouraal.

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Single Number Worth $25.

I am glad to see you getting into line with a $1.00 publication. From the standpoint of one specialist at least, I wish to say that I prefer 25 cents worth of the American Bee Journal to the money, any time. What does a dollar a year amount to when a single number may suggest something worth $25? Bee-keepers are at last awaking to the possibilities of their profession, and it will not be to turn down one of the best bee-papers simply beause it costs 25 cents nearer to what it is really worth. This is my honest opinion, at least.

Hebron, Ind. F. B. CAVANAGH.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

Arrangement of Hives for Bulk-Comb Honey Production

We have been in the midst of a great rush during our early April honey-flow; when we have had *to do things;* when every labor-and-time-saving short-cut method and management had to be brought into play. And during this time we have found what it is to have a proper arrangement, or system of arrangement, of the hives in the apiaries.

We have tried many ways of placing the hives, arranged differently in as many apiaries, and have found some all right, while others had great disadvantages. Placing hives in straight rows, equal distances apart, is bad practice, even if the hives are several feet apart. Placed in rows, and in pairs is better; still, each pair is like another pair in the same row or the next rows. Too much sameness should not exist, mainly on account of the resultant loss of queens in mating, and also to avoid the drifting of bees.

We prefer to handle our hives in groups, and therefore arrange them accordingly. There is a great advantage in working the colonies in groups of 5, as we do, and especially in our extensive work in producing bulk-comb honey, with the idea in view to reach the greatest possible quantity with the least amount of labor and expense.

At the same time we prefer shade—natural shade, or at least a partial shade—during the heat of the day. We detest shade-boards, after trying several kinds, so we make use of scattering trees as they happen to stand in the apiary.

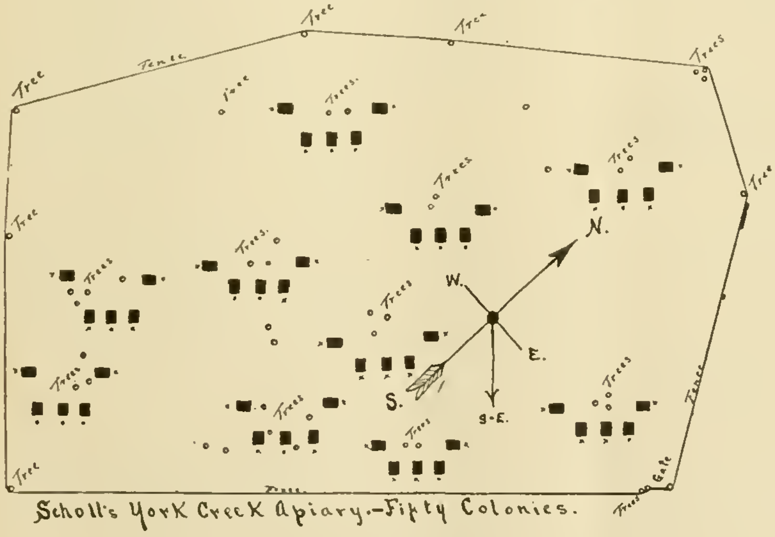

Fig. 1.—Apiary Arrangement—Groups of Five Hives.

Under each tree we arrange the hives in groups of 5's, as you will see in the sketch of our York Creek Apiary of 50 colonies. By studying this closely you will see that 3 hives face southeast, if you will look at the way the arrow points. These 3 are placed about 3 feet, or a little more if the tree is larger, from the main trunk of the tree, or trees, where there are several in a group. This allows free passage-way for the operator from behind them. From 1½ to 2 feet of space is left between the hives, from each other. Two more hives are then added, as in the pictures, one facing northeast and the other southwest. Although all the colonies do not have shade all parts of the day, each gets a good share some time during the day, especially during the hottest part. Then having hives placed as we have them, the hottest sun strikes them at the corners instead of side or end, thus protecting the colonies inside to a great extent. Such an arrangement has to be tried to be appreciated.

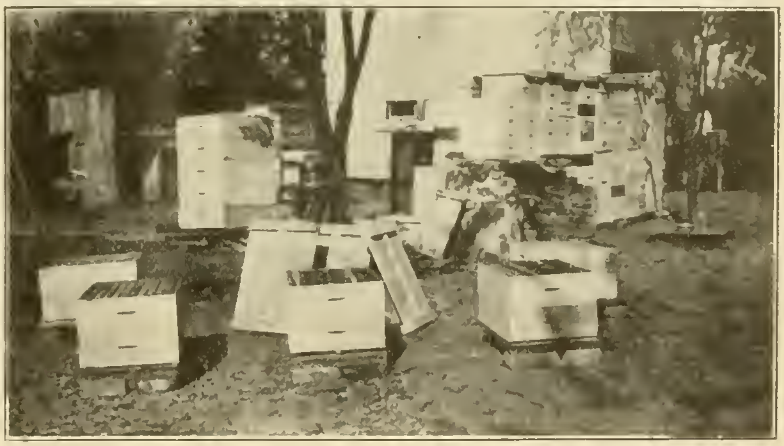

Fig. 2.—Group of Five Hives—Ready for Supers.

We work the groups from behind, or the northwest side, with all the entrances facing away from us. There is no interference with the bees' flight, as we always have our backs near the tree behind us, where very few bees fly. We are also, most of the time, in the shade, especially the hottest part of the day. The trees serve us a double purpose. Besides furnishing shade for the bees and for us, we use their trunks to lean against the covers, supers, etc. while we are operating the hives.

One of the prettiest pictures is that of Fig. 2. It shows to our hearts' content the ease and convenience with which this arrangement permits us to put on *5 supers at a clip* in less time than it takes to tell it. That's what we call saving time and labor, which is expense, and one of the short cuts which helps to make profitable bulk-comb honey production. But I'll tell how it is done, although it will take much longer to do this than the real operation itself.

As our hives are arranged this way—in groups of 5—our other manipulations are made in 5's; and it is the easiest way to keep account of the hives in the apiary, supers added, or other work done. Just as we manipulate our frames and combs in sets (or groups) instead of handling the frames individually, just so we continue this method of grouping in our apiaries in the arrangement of the hives in groups. Yea, we go still further, and *even arrange our apiaries in groups*, managing each group separately, and then grouping the whole again into one business on an up-to-date, extensive scale. The latter will be described also in due time later, but at present I would like to have the reader's attention on this grouping-of-hives plan; and, if possible, try a group or two, and also our manipulations, as we shall endeavor to describe them from time to time.

Accordingly, then, to conform to the groups of 5, our hive-cart is arranged. It takes 15 supers, or enough for 3 groups at a time. This load is wheeled to the rear of a group; with smoker in the right hand, the left raises off the covers in a jiffy, jars the bees off on the ground in front of the hive, and places it against the tree behind, while a puff or two of smoke keeps down the bees. The next hive receives the same treatment, and then the next, and in 5 jiffies all the covers are piled against the tree, with the smoker sitting on top of them, as shown.

Now the 5 supers are lifted off the cart *in one load* (they are light), and set on the first hive opened, the lower one released, and 4 set on the next hive, releasing each lower one until only one super remains for the last of the group.

Now the smoker is grabbed again with the right hand, a whiff or two of smoke chases the few bees that have had time to crawl up to the top out of the way, and the left hand replaces the covers in several jiffies more; and that's so easy, everything is always in place, the trees standing ready for you at all times. This saves much valuable time, as there is none wasted looking for a place to put the covers, or looking for them when they are scattered around when the hives are to be closed again.

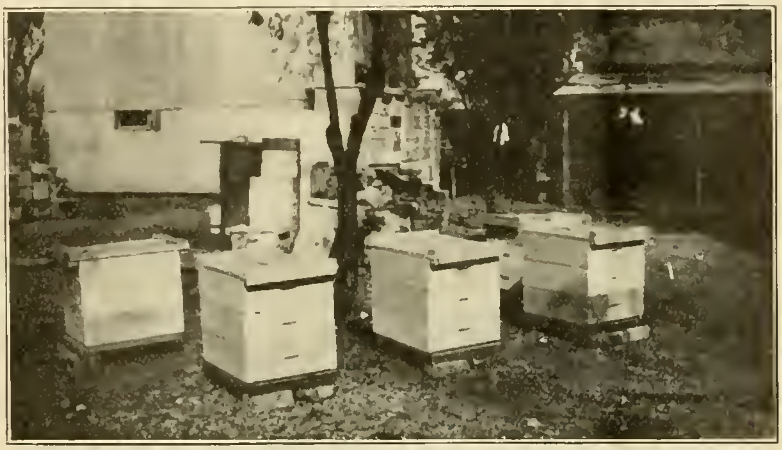

Fig. 3.—Group of Five Hives—Supers in Place.

In Fig. 3 we again see the same group of 5 hives, supers and covers all in place, and it has all happened so quickly that the bees below hardly know it happened. We do not stop to smoke at the entrances when we put on supers. Not necessary; only a waste of time when bees are gathering honey, and it would only set them back or disturb them unnecessarily. This is quite an item, as it saves time for the operator and the bees.

This is given for those who wish to arrange their hives systematically; and what better arrangement could one wish?

Contributed Articles

Old Comb Foundation—Will Bees Work It?

BY C. P. DADANT.

I see in the April number of the American Bee Journal that several ask the above question of Dr. C. C. Miller, and he answers it favorably. As I have made experiments on it, I thought best to mention them.

Years ago the statement was made in the bee-papers that comb foundation became worthless with age; that the bees would cut it out. I decided to test this for myself. I had at that time, in the upper room of our shop, a box of foundation of an odd size which had been made for a special order, and the one ordering it had countermanded the order. As it was a large size, and we did not wish to work it over or cut it, we had put the box away, hoping to fill an order with it sooner or later. But it had been forgotten and had laid there two full years. I used a sheet of this to make my test.

In June, when the bees were at work and storing some honey, I placed this sheet of foundation in the center of a colony. Then I took a sheet of fresh-run foundation and placed it also in the center of the same hive, with only one frame of brood between the two. They were therefore on an equal footing—old and fresh alike.

Two days later I opened the hive and found both sheets drawn and eggs laid in both. This, it seems to me, ought to be sufficient evidence that old foundation is as good as new, even if there might be a few hours of difference in the acceptance of it by the bees.

But now let me explain why old foundation is considered as less readily accepted by the bees, and why the bees sometimes cut holes in it.

Beeswax has peculiar properties. My readers all know that it becomes so by heating, and finally melts when enough heat is applied. But many do not know that when beeswax has been heated, it retains its flexibility for quite a time, even if the heat is not continued. I may very well compare it to iron, for it may be malleable or brittle according to the manner of rendering it and manipulating it. It has similar properties to those of iron also in this, that time acts upon its malleability. Those of you who have used wire for fences, or for grape-trellis, know that new wire, fresh from the factory, is not brittle unless tempered. But those who have seen the same wire on their fence or on their grape-arbor for 30 years, know also that at the end of that time, even if it is galvanized, the wire is much more brittle. So it is with beeswax. It is more brittle, and therefore harder, when it is old. To give back to iron its ductility, it is necessary to melt it. But not so with beeswax. It takes much less to give it back its flexibility. Heating to blood heat or a little more will render it flexible again.

If we have foundation from the previous years in our hives outside of the cluster, this foundation has become hard and is not attractive to the bees. Neither is old comb, until they have covered it for a few hours and given it their heat. But fresh foundation only a few days old, used by the apiarist, still shows a softness similar to that of new-built comb. The bees, therefore, take to it with great eagerness. That is why many apiarists will tell you that old foundation is not so readily accepted by the bees. But just as soon as that old foundation is covered by the cluster it becomes warmed up, and within a very few hours will be as soft and acceptable as the new-made. Of course, if both the old and the new are put into supers, the bees will not hesitate and will appropriate the new foundation more promptly because it is more malleable. But if you do as I did in the experiment referred to above, and place both kinds in the center of the cluster, the difference in the acceptance of the two by the bees will be so little marked that you will not be able to detect it after the lapse of 48 hours.

Now, why do bees cut holes in foundation that has been in the hive a long time? If you were to watch them you would see that they use the particles thus cut to repair the combs within the cluster. This cutting of holes in foundation is always done when they do not see the possibility of using it where it is outside of the cluster.

There are, however, exceptions to all cases. Some foundation may be so covered with dust that the bees have repugnance to use it. You find similar instances with dried-up combs which are given them in partly-built sections. I have sometimes seen the bees build new combs in preference to using old ones that were within their reach. But give them old combs in the center of the cluster and see whether they do not use them quickly. If there is anything moldy or objectionable about such combs, when they are inserted by the apiarist in the heart of the brood-nest, they soon cut out the objectionable parts and make new work out of the old. You will find the case exactly the same with comb foundation *made of good beeswax*, no matter how old it may be.

It is therefore safe to say that old comb foundation, which has been properly kept, will be worked by the bees as readily as, the new goods as soon as it has been heated sufficiently. Exposing it to the heat that would soften it for a few minutes previous to its insertion in the hive, would make it as promptly acceptable as new goods, but this is not at all necessary.

Old comb foundation has one advantage over new goods. Owing to its very toughness it is less liable to stretch or break down under the weight of bees than the other, and is safer for swarms.

A CORRECTION.

In closing, allow me to correct a typographical omission in my last article on honey-vinegar, page 127. In the eleventh line, the printer makes me say, "If the air has been excluded the acetic fermentation has probably also begun." It should read, "If the air has *not* been excluded." All reasoning persons who have followed my explanations have readily understood that the air is absolutely necessary in the making of vinegar. Oxygen is at the base of nearly all chemical changes.

Hamilton, Ill.

* * *

Bee-Keeping in Old Mexico

BY B. A. HADSELL.

In my last article, in describing the route from the city of Mexico over the International & Vera Cruz, a few words were overlooked which do not make it clear, which I will now explain.

From the City of Mexico until we drop down out of the clouds it is a vast tableland, owned by wealthy land owners, each having large buildings with many tenant houses, with street railroads connecting the railroad stations, and the land is devoted to farming one crop of corn or barley, therefore not a bee-country.

Much of the shrubbery in Texas, New Mexico and Arizona, such as the mesquite and catclaw, have thorns, and so it continues until you reach the tropics of Mexico. There nearly everything has bloom with but few thorns, even the mesquite drops its thorns, or rather changes to a number of varieties which have no thorns, but produce bloom and beans similar to those in the States. Nearly all varieties of trees bear bloom at some time of the year, and when the tree is not in bloom the morning-glory covers them at the height of 20 to 40 feet, furnishing bloom during the season we term winter in the North, and I should judge it to be the greatest honey-flow of any time of the year, yet I am puzzled to say just when the greatest flow would be in the tropics, as there is so little change in the temperature, that the bees can work continuously. It is possible that some of the blooms which stand upright may have the honey washed away by rain during what we term summer, but I am confident that many of the bloom hang down, and that the honey is protected, and can be gathered by the bees, at any time of the year when it is not raining, and it seldom rains execpt in the evening and the night, and then they can get a great abundance of honey .

The tropics of Mexico are certainly the bee-man's paradise. My ambition has always been to be the largest bee-keeper in the world, and Arizona was probably the best location in the United States that I could have selected to accomplish that end. I probably reached the height of my ambition, but think I have found a better country on the southwestern coast in the tropics of Mexico, and am closing out my bees in Arizona as fast as I can find buyers, and hope to make Mexico my future home. The most desirable location that I found is from Geronimo to Tapachula. This valley is about 20 miles wide and 225 miles long.

At Geronimo the rainfall is 30 inches, and where they raise one crop of corn or grain a year without irrigation. This is a heavy mesquite country, of many varieties, which furnishes a heavy honey-flow. The rainfall increases as you go south. At Tonala it is 60 inches, where they plant and husk corn every day of the year, and rice and sugar cane produce big crops without irrigation. At Tapachula it runs over 100 inches. The hilly section north of this valley receives three times the amount of rainfall in the valey. The valley section is covered with grass waist high, covered with fat cattle the year round. The valley slopes from the hills to the ocean, with prairie on the upper portion and valuable timber on the lower portion next to the Pacific Ocean, with mountain streams running across the valley every mile or two, making perfect drainage. There is scarcely an acre of waste land in that entire valley. The soil is very rich, with the purest of water and the most ideal climate of any place on the North American continent, the mercury never dropping below 55, or goes above 90. It is claimed that throat and lung trouble is unknown there. The Pan-American railroad runs through the center of this entire valley, and it will soon be one continuous line from Seattle, Wash., to the Panama Canal. This valley is the natural home of the orange, lemon, lime, and many other tropical fruits which grow wild in the woods, furnishing honey for the bees and fruit for the inhabitants.

Buckeye, Ariz.

(To be continued.)

* * *

Apiarian Progress of 50 Years

BY G. M. DOOLITTLE.

Looking over some papers found "stored away in the garret," I ran across an old bee-paper, and about the first item my eyes alighted upon was these few words, which carried me back to my childhood home and my father's bees, which engrossed my attention more than half a century ago:

> "Bees, like poultry, belong largely to the farmer. He wishes to have an abundance of the sweets for his table, and if in bounteous years there should be some surplus, it is that much extra to be exchanged for other things."

Of course I, myself, did not keep bees more than half a century ago, but I can remember, as if only yesterday, when my father and a neighbor living nearly 2 miles away, who had a few colonies of bees, came to "our house" bringing one of those colonies in a box-hive (a simple box of boards about 14 inches square, with a cover nailed on one end, the height of which was about 20 inches), this hive hanging in the center of a sheet tied at the four corners, and carried between the two men by means of a pole resting on their shoulders, after the pole was passed through under the tied corners of the sheet. This is a very safe way to move bees, but hardly the one W. Z. Hutchinson would advise side by side with his ever-pushing advice of "keep more bees." A 4-horse team with a broad and high hayrack, capable of carrying 40 to 60 colonies, or a railroad train, are now needed by the Hutchinson type of men.

Next I wish to notice those words, "Bees, like poultry, belong largely to the farmer." Father was a farmer, "pure and simple," as all were classed in those days who followed mixed agriculture, as nearly every one did. About 2 years after this hive in a sheet carried on a pole arrived on "our farm," I was so interested that I went around among the other farmers who had bees, and I can now, in memory, count up some 15 "apiarians," all of whom lived within 2 miles of our house, and numbered their colonies from 2 to 15, and some 20; these latter being looked up to as *large* bee-keepers. For such to have been advised to "keep more bees" would have nearly "taken way the breath" of the "whole farming community." In that same circuit, in this year, A. D. 1910, only 3 persons keep bees, and neither of these would make the claim of being farmers, further than having a little land to set the bee-hives on, and a garden. Then, oh! it seems but yesterday, the ding-dong and a-rat-a-tat of the bells and beating on tin-pans, announced to the farmer in the corn or hay fields that "the bees are swarming," and I can in memory see the one living across the valley running from the field, and arriving all covered with "sweat," so that the bees could be "swarmed" before they "run off to the woods."

I often wonder what those who kept bees then and passed to "the great beyond" when I was a boy, would think if they could "appear on the scene" in this age of "keep more bees." Not one of them would know what the term "extracted honey" or "section honey" meant, without an explanation. Then all of the colonies with "hives which were hefty," and those thought too "light" to winter, were "brimstoned," and after the hives had been jarred and pounded upon so as to "jar the dead bees down into the brimstone pit," they were taken to the kitchen, pried apart, when the combs were cut out, and that sealed honey portion of the combs which was white and nice, put by itself when cut "where the white and dark honey separated," while the rest of the comb having honey in it was "chopped fine," when this "sweet mass" was put into a bag and the same hung up before the "old open fire-place," over the "big brass kettle" to "strain." This "strained honey" was offered to those who kept no bees, in exchange "for other things" as the writer quoted at the commencement of this tells us, and in this way all of this class of honey was disposed of to the mutual advantage of all concerned.

Then, the white "honey in the comb," was taken to the towns and villages near by and exchanged for boots, shoes, "factory cloth," yarn for mittens and socks, which mother used to knit so nicely for us—bless her memory; and if sugar was wanted, the merchant would, "just to accommodate," give one pound of "confectioner's A" for 2 pounds of the honey. "'Twan't right," mother used to say, "but you know, husband, I can't use honey for making that company cake." That kind of sugar was the first *white* sugar I ever saw, but now it is impossible to get one pound of the dark "muscovado" sugar which used to be the sugar in common use at that time—plenty of which could be bought for 3 cents a pound, or the merchant would give 3 pounds of this for one of the white honey, by way of exchange, till he had enough honey to supply the wants of "home consumption."

Then, in those old days, our queen-bee was a "king," and the "sight of the king," when a swarm was being hived, was considered something worth telling about among all the neighbors, while the embryo queen-cells we now find on the combs were "the cradles of the kings," which, when clipped from the combs after brimstoning, were given to us children to play with. What would have been thought of the person who would have dared predict that before half a century had passed the traffic in king (?) bees, for "the improvement of stock," would amount up well into the thousands of dollars, if not into the hundreds of thousands. And what would not those fathers have given to have known of the non-swarming of the present, where whole out-apiaries with colonies numbering from 3 to 10 times the colonies kept by the "large apiarians" of those days are kept without a single swarm to be cared for or lost? Those men who had to "run" from their work in the fields to care for swarms, were equally anxious to prevent swarming with those of the present, but with their "gums" and "box-hives" were not able to accomplish the things the many improvements of half a century enable us to do.

We older ones almost stand aghast at the mowing machine which takes the place of the scythe of 60 years ago; of the self-grain-binders, which take the places of the sickle and cradle; of the wheel-rake on which the rider is drawn by a horse taking the place of the hand-rake, by means of which the old men prided themselves as to who could "close the nicest winrow" in haying time;" of the hay-loaders taking the place of the hand-rake and old ox-cart "laden with its burden of sheaves;" of the bicycle, the automobile, the airship, the telephone, by which a farmer talks to his neighbor through "a hole in the wall;" the phonograph by which "the dead still talk to the living," etc., all of which are even beyond the very thoughts of the past. Yet in all of these, there has not been an advance so much above that made in bee-keeping, when viewed from an apicultural standpoint. In those days an extractor, a section honey-box, a movable-comb hive, separators, comb foundation, queen-bees reared on a stick by the thousand, shipping-cases for honey so perfect that our product can cross the continent by the car-load in safety, etc.; all of which was as far from the minds of our fathers in bee-keeping as were the autos, phonographs and telephones from the minds of the great mass of those living in that age. Surely bee-keeping has kept well abreast of the times. And had the writer of that little item which brought out these thoughts been living today, he would see bee-keeping as "belonging to the farmers" passing mainly from them into the hands of specialists. It is something wonderful, what has come to the bee-keeper, as well as the rest of the world, during the past 50 to 75 years.

Borodino, N. Y.

Swarms Deserting the Hives—Other Topics

BY E. V. PAGAN.

G. A. Barbisch asks, page 81, why his swarms left the hive after being hived, even when a frame of brood was given. He seems to think the clipped queens had something to do with it. Hardly. A colony does not seem to know any difference between a queen with clipped and a queen with whole wings, for it will swarm out with a clipped queen just the same as if her wings are whole, and it is not likely that the swarm knows any more difference. He is probably right that it was "because it was so tremendously hot during swarming time, and the swarms were so large." Added to that it may be that he took no great pains to give unusual ventilation. The excitement of swarming always begets a great deal of heat, and if a strong swarm on a hot day is put into a close hive, especially if the hive stands in the sun the bees get out. Give all the ventilation possible below, and at least for 2 or 3 days give large additional ventilation at top, either by raising the cover or by shoving it forward so as to leave an inch opening. If the hive is not in the shade, shade it in some way, perhaps by putting on top hay or long grass anchored down by a stick or two of wood. Showering the hive with water also helps.

Bait-Sections and Swarming.

Ralph . P. Fisher, page 85, seems to think that in some way we should avoid using bait-sections. Just how he thinks it can be done, and his reasoning connected therewith, seem a little hazy, but as nearly as I understand, he finds out which colonies would need baits, encourages them to swarm, hives the swarm in a small hive and later on transfers them to a larger hive. That seems a good deal like surrendering the whole thing. Nothing is done to hasten work in supers until a colony has swarmed, and after that time bee-keepers in general are not particularly concerned about hurrying super-work, for the bees themselves commence promptly, even if hives are not so very small. The chief object with all, with many' the only object, in trying to hurry super-work is to prevent swarming. But Mr. Fisher seems to say, "If they want to swarm, don't do anything to prevent it, but if they must swarm encourage it." And swarming, in the general opinion, cuts down the honey crop.

Right down at bottom, his objection to baits is the fact that he has little or no faith in them to hurry up work. If he is right in that, then he is right in not using them. But if he has had experience with baits, it is hard to see how he can believe they make no difference. The fact that bees begin work in a bait before they begin in any other section ought to be proof enough that they begin work at least a little sooner in a baited super than in one not baited. Moreover, in a poor season the writer has had many a bait filled in a super and the foundation not drawn out in a single one of the remaining sections in the super. Can proof be stronger that they have a marked preference for the bait? If Mr. Fisher will give baits a fair show, he will probably find that he can cut down still more the small number of swarms he now has.

Blending to Prevent Granulation.

That's a good convention report, page 91, but in one spot the mistake is made that is only too common of telling about something just enough to awaken one's curiosity, and still leaving one in the dark. On page 92 is this: "He described a method of blending to make a good basswood flavor, to help prevent granulation." Now what's the use of taking up space to say that, and then leave us entirely in the dark as to what the method is?

Plan of Swarm Prevention.

The plan to prevent swarming, by A. C. Allen, page 94, is the Demaree plan, given by G. W. Demaree many years ago, which has proved reliable in many places, but there have been reports of some failures. The unfortunate thing about it is that it can be used only when running for extracted honey.

4.---Bee-Talks for Beginners

BY JIMSON RAGWEED, OF INDIANA.

Selling Bees—Hiving Swarms.

Uncle Jimson:—Ma wants to know if you would care to buy our bees. Pa has so much to look after, and ma says she cannot carry heavy hives about the yard at swarming-time like she did last year.

We had a nice letter from Sammy yesterday. We were surprised to know that he is in a business college in Knox County. His letter was printed just like one we had from the Empire Medicine Company.

Pa has gone to Martinsville to vote, and ma is making her ash-hopper.

Your neice, Lucile Ragweed.

Dear Lucile:—If I could I would discourage your ma about disposing of her bees because the season promises good, and a great many lady bee-keepers are making quite a success of the business. I think, too, that some of the hardships which you mention can be avoided. I remember that when you have a swarm your ma takes a hive to the swarm to be hived and then moves the hive after dark. I do not consider this the best plan, because a newly-hived swarm goes to work at once, and they mark their location, and after being moved many bees return to that location, possibly to perish. I would solve the problem like this: Place an empty hive on its permanent location, and then bring the swarm to the hive. This lightens the work, and is much more satisfactory, for if hives are carried about after the swarm has entered, frames may be jolted apart and combs would then not be satisfactory.

Your uncle, JIMSON RAGWEED.

A BOY BEE-KEEPER—HIVING SWARMS.

DEAR UNCLE JIMSON:—I am now 8 years old. I go to school and to Sunday-school, and I help pa with the bees. We have 7 colonies, and pa is going to get a slinger.

Pa says to thank you for the picture with your hair down on your shoulders. Ma says she thinks you look more like grandpa Ragweed than any of the boys.

Pa wants me to ask you how you hive a swarm of bees. Pa pours them in at the top of the hive, but when he puts the lid on he smashes some of the bees, and then we feel so sorry.

I have 64 Lincoln pennies and a dog. Has Steve and Eva got a dog?

If you get this, write soon.

JAMES RAGWEED.

DEAR LITTLE JIMMIE:—I am surprised that you can write such nice letters. Tell your pa that I think the best way to hive a new swarm is to pour the bees at the entrance of the hive after having the empty hive on its permanent location. As soon as a few bees get started in they will hum a note of "Home, sweet home," and they will just scramble over one another to get in. Not a bee will be killed. I am like you, I always feel sorry when I see a bee destroyed.

Steve and Eva have no dog, but they have 7 or 8 cats.

Our best wishes to all of you, and you must write again to your uncle.

JIMSON RAGWEED.

BEE-KEEPING AS A BUSINESS.

MR. RAGWEED:—I have seen your name in one of the bee-papers, and I would like the privilege of asking a few questions about the bee-business. I am thinking of taking up the business as an exclusive line, but I have had no experience. About how many hives should I keep? What race of bees do you recommend? My library is quite complete on bee-literature, and I find the subject very fascinating. Pardon me for intruding on your valuable time, but I would be much pleased to hear from you.

WILLIAM TAFTVELT.

MR. TAFTVELT:—The bee-business, like all other agricultural pursuits, has its ups and downs, and some seasons we have near failures. I have never seen a season so poor that bees would not produce some surplus in your locality, either from white clover or fall flowers. In your location you would have a home market for all you produce, which would be in your favor. In a good season profits are excellent, and I have known a single colony to net its owner as much as $20. It would be unfair to expect such a yield regularly, but I think one-fourth the amount, or $5 per colony, as an average, would be fair. I do know that in your locality you could realize 20 cents per pound for comb honey and 15 cents for extracted. Retail dealers are getting this price, and the public would much prefer to buy from the man who has the bees.

As to making it an exclusive business, you should have at least 100 colonies, and then it might be well to establish out-apiaries of 75 to 100 colonies.

As to race of bees, I prefer the gentle Italians, but personally I would not try very much to keep up a high standard of purity where honey alone was my object. I am very partial to the gentle strains of bees, and I have beheaded many queens because their bees were inclined to be cross.

Poultry and small fruit go nicely with the bee-business, and I have often thought it might be well to have some other line on which to fall back in a poor season.

One other thing: One may be thoroughly well read on any subject, but in learning many of the details, actual experience is required, and on this account I usually advise beginners to start with a few colonies and then increase as experience may suggest. That the business is fascinating to you is much in your favor, and yet any one who studies the bee is bound to become deeply interested. I have kept bees for many years, and have no intention of giving it up, although I could take the agency for a certain brand of rattle-snake oil and make much more money.

Very truly, JIMSON RAGWEED.

Easy Comb-Honey Production

BY W. K. MORRISON.

There are hundreds of readers of the American Bee Journal who would like to find some way to produce comb honey as easily as extracted is now produced. They can sell comb honey readily, but it costs too much in time and trouble, and extracted honey is too hard to sell.

If you are in the above class, I wish to ask the favor of your closest attention, hoping you will do me the honor of following my directions to the letter. You will undoubtedly be told that producing comb honey in this way is impracticable, etc. Please do not mind such advice for once at least, and try the experiment yourself.

There are certain facts that should be borne in mind at all times, when we are producing comb honey.

First, swarming is the stumbling block in comb-honey production. If you control this without in any wise weakening the bees you have made a great step forward. The usual plans recommended are an aggravation rather than help. Mr. Louis H. Scholl recommends a plan that is certainly effective, but not all of us can dispose of canned comb honey. In the meantime we want something practical until the Scholl idea has gained more ground.

At the present time, when we put a comb-honey super on a strong colony, the net effect is to cause the colony to swarm. In any case it does not keep the bees from swarming. When a super with frames of comb is put on, the case is different. *Swarming is arrested at once*, and if this policy is consistently carried out the whole season, there will be no swarming worth mentioning. Why?

Our English cousins have gone a step further by adding a super below the brood. The bees are not expected to use this super, but the added space tends to check the swarming impulse. Do you see the point? Well, it is this: A large vacant space is necessary. A super with a lot of partitions is not regarded by the bees as a vacant space. On the contrary, the bees have to be *compelled* to enter it.

The idea now presented is to create a comb-honey super that closely resembles a super for extracted honey. The fewer partitions the better, and the nearer the sections correspond to frames the better. They must be about the same width. Let me state the specifications:

1. Sections must be open on all 4 sides.
2. Sections as narrow as possible—not more than 1⅜ inches from center to center.
3. Dr. Miller's T-super.
4. Absolutely no separators.
5. Starters; if full sheets are used they must be attached on all sides.
6. Hives set perfectly level. Use a brick-layer's spirit-level.

The first two points are very important. No success need be anticipated unless these are strictly adhered to.

I discovered long ago that bees cannot make straight combs if the thickness is greater than one inch. They will make reasonably smooth combs when the width allowed is not more than 1⅜ inches from center to center. They will do better at 1¼ inches from center to center, and even better at 1⅛ from center to center. Bees allow only ⅙ of an inch between two *honey*-combs, so that the thickness of comb at 1⅛ from center to center is almost one inch.

I once made a lot of hives with sections in the brood-chamber instead of frames. They were spaced at different widths. At 1¼ inches I secured the best results. The worst results were obtained at 2 inches.

You will have some trouble in getting narrow sections, as bee-supply men do not have them in stock. To get around this difficulty buy plain sections, and cut the insets yourself. They may look a little rough, but your customers won't mind that in the least. I used a Langdon mitre-box to cut the insets, using a chisel to gouge out afterwards.

You can readily make the T-super by purchasing long boards cut the right width and thickness at the planing mill. T-tins can be had by express or mail. The outside sections require an extra bee-space, but little chips of section stuff will provide that. There is no harm in using a follower.

To get good results the supers should be placed on in ample time. One of the causes of swarming is too much honey in the brood-apartment. The queen finds herself restricted for room to lay, and concludes the hive is full up.

Another point that must not be overlooked is ventilation. During hot weather provide an entrance to each super or story by pulling it back a little till there is just enough room for the bees to pass out. Also, pull the cover sidewise a little until the space between the follower and the side is exposed. I know full well what the text-books say about this matter. But pass them by for once. Writers often entertain views that are quite erroneous. The greatest fallacies have always had able writers to defend them. I have lost a great deal by following the writers of bee text-books. We bee-keepers have followed too ardently after writers who had an axe to grind, or they were too theoretical. Anyway, let us get out of the rut. Text-books are seldom original. They follow ruts.

There are a number of other points that I might mention, but they are not absolutely essential, and many bee-keepers cannot afford to make radical changes just now. One of these points is non-propolizable hives. Such hives are regularly advertised in Europe, and they are quite within the range of practical bee-keeping. *In many things we are behind Europe.* Our hive-roofs, or covers, also bottom-boards, are poor affairs. Their only merit is cheapness. I often think the great *improvements* we have made on the original Langstroth were in the nature of steps backward towards the plain box-hive.

Personally, I prefer a broad, shallow hive which gives much room for sections, so that when a super is well filled it will give 45 to 50 filled sections. That is not quite essential, but it seems to me bees notice a super so placed much more readily than one which stands on top of a tall-shaped hive. I like to put that vacancy as near the brood as possible, so as to check the swarming fever. Shade also has something to do with this matter. Bees hived in a tub are not likely to swarm, if shaded. Put the bare tub out in the sun and they will swarm with the tub half-filled with combs.

It is my opinion we can control swarming so well that not more than 2 percent will swarm, and that, too, without any elaborate arrangements for controlling the same. The main thing to remember is to fashion your comb-honey hives so as to resemble hives arranged for extracted honey.

San Diego, Cal.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
DR. C. C. MILLER, MARENGO, ILL.
He does NOT answer bee-keeping questions by mail.

Best Comb-Honey Super and Hive

1. What kind of super is the best to use for comb honey, and what are its advantages?
2. What hive do you think is best for comb honey? WEST VIRGINIA.

ANSWERS.—1. Personally, I prefer the T-super to any other. It is simple, costs little, and those who use it correctly have good results with it.
2. I doubt if there is anything better than the Langstroth hive, the commonest form of which is called the dovetail hive. The 10-frame size is best unless one gives much attention to the business.

Alsike Clover in Kentucky

Will alsike clover make bee-pasturage in this State (Kentucky)? A very small amount has been sown in this country until the last year or so, white clover being the principal source of honey. KENTUCKY.

ANSWER.—I think alsike may be counted on as a good honey-plant wherever white or red clover does well.

Kinds of Bees

What kind of bee is each of the ones I have enclosed herewith: The queen, 1; the bright striped bee, 2; the glossy looking one, 3; the common colored bee, 4? CALIFORNIA.

ANSWER.—You cannot tell by looking at a single bee what sort of a colony it belongs to. It is possible that all 4 specimens belong to the same colony of hybrids, a cross between blacks and Italians. For such a colony often has some bees that have 3 yellow bands, the same as pure Italians; some with no yellow, and some between. One of the workers seems to have 3 bands, as nearly as one can tell from a dried-up dead bee, and it may belong to a pure colony or to a hybrid. One of the workers may be pure black, or it may be hybrid. The queen may be almost anything; for one judges from workers, not from queens.

Cork-Chips for Water-Floats

What size of cork-chips do you use in water to keep bees from getting drowned? Also, about how thick is the layer of corks on top of the water? I am trying to get cork-chips here. I can get granulated cork, of which I have samples Nos. 2, 3, and 4.

Watering bees in this locality is quite an item. My 75 colonies get away with as high as 60 gallons per day. I have to haul it all. I have been using large troughs filled with brickbats, but the bats take up almost all of the space. I also tried second-hand corks (cut them up), but in a few days the water would be foul; mostly wine-corks. I am sending samples of cork-chips. Should they be finer or coarser, etc.? CALIFORNIA.

ANSWER.—I don't believe it makes so very much difference as to the size of the cork-chips, although I suppose the finest chips will lose their buoyancy soonest. Neither does it matter greatly as to the depth of the layer, only so it be not so thin that the bees will sink down into the water, nor so thick that they cannot reach the water. The chips I have been using are those which the grocers receive as packing in kegs of grapes that come in winter, or at least very late in the fall. The chips are of various diameters, from very fine ones up to those that are ⅛ inch or more in diameter. A layer about ¾ inch deep is first used, and more added later as they become soaked. The idea is to have enough chips so that the top surface will be a little out of the water. Although I never tried that size, I suspect that the coarsest you send (something like ¼ inch in diameter) would be ideal. After giving cork-chips a fair trial, if you find they're not great, please send me a letter "blowing me up," and I'll publicly apologize.

Getting Increase—Using Old Combs

1. Nearly all the bees in this part of the country were lost during the winter. What is the best way to increase?
2. I have considerable honey in hives where the bees died. Some is not capped, and is a little sour. What is best to do with it? Would it make vinegar? If so, what is the best way to make it? Where the honey is capped it seems to be all right.
SOUTH DAKOTA.

ANSWERS.—1. I don't know. It depends upon circumstances, and especially upon your knowledge. If you have no bee-book, and very little knowledge of bees, very likely there is nothing better than to let the bees swarm naturally, hiving the swarms on the combs left empty by the bees that died. If you have studied a good bee-book thoroughly, so as to have a pretty thorough knowledge of general principles, you will likely be able to tell better than any one else what is the best way for you. If you have no such book, it will pay you big in the present case to get one. "Forty Years Among the Bees" is perhaps more full upon the subject of artificial increase than any other book, but I can hardly recommend it as the first and only book for a beginner. In any case, those empty combs ought to be quite a help to you, and if you have not already done so, you ought to clean out the dead bees and keep the combs in good condition till they can be used. It will be a good plan to put one or two stories of these combs under each colony, and then when given to swarms they will be readily accepted. But this may delay swarming, if you depend upon natural swarming. At a venture, I may suggest that if you are familiar with it, the nucleus plan of increase is a pretty good one.
2. If the honey is only a little sour, it may be given to the bees, one frame at a time. It may also be used as you suggest, for vinegar, and you will find full instructions as to this in the very excellent articles by C. P. Dadant in late numbers of the American Bee Journal. He knows ever so much more than I about making vinegar.

Labeling Honey

1. A friend of mine contends that it is necessary for me to place my name on every section of honey I sell in the State. Is this true?
2. What is necessary if I ship out of the State?
3. Would the comb foundation I put in sections prevent me from labeling it "Pure honey gathered from the nectar of flowers by bees?" ILLINOIS.

ANSWERS.—1. Your friend is entirely mistaken. There is nothing obliging you to put your name or anything else on your sections.
2. All the same whether you ship out of the State or sell in the State, as the pure-food laws of the State are about the same as the Federal laws.
3. The foundation makes no difference. It's beeswax, just the same as when no foundation is used.

Doubling Up Swarms

1. I would like to know the best way to double swarms up. If they both come out the same day, or a day or two apart, should I put the old colony on top of the new swarm? Should I take the bottom out of the top hive, or how can I get them together?
2. If a swarm comes forth, and you don't see what hive it comes from, is there any way to tell what hive it comes from?
NEW YORK.

ANSWERS.—1. If they are only a day or two apart, the easiest way is to hive the second one in the same hive as the first, just as if the hive were empty. But both queens must be laying queens, or else both virgins, for 2 swarms will not unite kindly if one has a laying queen and the other a virgin.
2. Take a bunch of the bees away from the swarm, dredge them with flour, and watch to which hive they fly back. Of course, you may also be able to make a good guess by looking into the hives and finding one which has a scarcity of bees.

Ten-Frame Hive for Winter—Feeding Section Honey—Getting Extra Frames for Spring Feeding

1. My bees wintered well, but I found 2 colonies very light. One was in an 8-frame Wisconsin style, and one in a 9-frame Acme. This year I am going to use the 10-frame dovetailed hive. Do you think they will winter better if we have a good year?
2. I fed these colonies by placing a super on each, and put in three 1-pound sections of honey, and repeated when empty; one colony does not use any more of the honey given. Was that way of feeding all right, as I didn't have any honey? Why does that colony refuse to take the honey given?
3. Do you look into each hive in the spring to see if the bees have plenty of honey, or clean out the moth-worm? In looking into the hive and raising the combs, would it be apt to start robbing? When is the best time to do this work?
4. The fruit-trees are starting to bloom, the weather is fine, and bees are carrying lots of pollen. Do you think there is much danger of starvation when conditions are such as these? Do bees use pollen for food?
5. How do you get extra frames of comb honey to be used in the spring, if needed?
IOWA.

ANSWERS.—1. The change of hives will probably make very little difference in their wintering.
2. It is possible that the colony was weak and the weather too cold for the bees to get

so far from the cluster. More likely the bees have plenty of honey, and thought it was all right to leave the honey right where it was until they needed it.

3. Right away after the bees are taken out of the cellar I heft the hives by lifting them, and whenever I find one that feels light I look in to see whether it needs honey. I pay no attention to moths or their larvæ. There is not much danger of starting robbing if one is careful.

4. There may be no danger, and there may be great danger. Bees use stores rapidly at this time, and if there is not much honey in the hive a few cold days in fruit-bloom may find them starving. Also, there may be dearth and starvation between fruit-bloom and clover. The safe way is to have so much honey in the hive that there will be no danger.

5. Perhaps a few colonies are devoted entirely to storing honey in combs to be ready for emergency the following spring. Perhaps some are allowed to store in combs after the clover flow is over.

Foul Brood—Splinting Foundation

1. My bees have had foul brood. I lost 40 colonies last winter—foul brood, long confinement and honey-dew was the cause. I have 5 colonies left, and on account of foul brood I would like to shake them on comb foundation. When would be the best time to do it?

2. They are weak, and I would like to save all the brood I can. How shall I work it to save the brood?

3. How do you put splints in comb foundation, horizontally, crosswise, or up and down? and how big are they? OHIO.

ANSWERS.—1. "In the honey season, when the bees are gathering freely." Yet last year I operated in a drouth, there being no honey season.

2. Pile the brood up several stories high on a new stand, taking enough bees with the brood so it will not chill. In 3 weeks this pile can be brushed upon comb foundation and a queen be given.

3. The splints are put in vertically, running up and down. They are about 1-16 of an inch square, and about ¼ inch shorter than the distance between top and bottom bars.

Management for Increase

I have 2 colonies of bees and want to increase to 5. How would you increase so as to have them strong for the honey-flow? It comes about June 1st. What time should I make the increase? I would think that if I would take out the division-board and put a partition in it bee-tight, and put a queen in each side, they would have frames of brood between them; and when the honey-flow starts, take the partition out and introduce a queen, it would be all right. NEBRASKA.

ANSWER.—I don't know of any way by which you could increase 2 colonies to 5 and be likely to have all strong for the honey-flow, unless it should come very much later than the first of June. As to the time for making increase, it is generally not wise to undertake it before about the time when bees swarm naturally.

I cannot give an opinion as to the plan you propose, as I do not understand it.

A Beginner's Questions

1. I am a beginner and have only 8 colonies of bees. Last year I had one colony that had a fine Italian queen, and in October she was all right with plenty of honey for winter. When I opened the hive in March I could not find her, but there was another queen as black as any of the rest of my black bees. How did the black queen get there? She seems to have not a drop of Italian blood in her.

2. What race of bees will get the most honey, regardless of temper or any other faults?

3. I introduced an Italian queen into a colony of blacks, and in 5 days I found queen-cells sealed, and the queen I introduced was all right and laying, but the bees were taking care of the cells just as if they had no queen. Why did they do this when they had a laying queen?

4. How can I tell pure Italian bees?

5. How would it do to get queen-cells built in a hive with its queen in it, by putting all of the brood and bees over an excluder and leaving the queen below on empty combs, or giving a little more distance without the excluder? Would the cells be as good as those built in a queenless colony?

6. If I remove the queen from a strong colony in a good flow will the cells be as good as the ones started in swarming season?

7. What percent of your bees swarm?

8. What race of bees would you adopt if you could not get Italians? VIRGINIA.

ANSWERS.—1. Hard to tell. It is just possible that she flew there from some other colony.

2. I don't know. I'd as soon risk Italians as any. Continued selection, always breeding from the best, will improve the gathering qualities of any kind.

3. They often do so. The probability is that finding things irregular at the time of the introduction of the queen, they think something is wrong, and as a matter of safety start queen-cells. Then before the cells mature they find they don't need them, and destroy them. But sometimes the cells are allowed to go on to maturity and the introduced queen is killed.

4. The regulation rule is this: Look at the worker progeny; if they show three yellow rings, the mother is pure, and purely mated.

5. If brood is separated from the queen by an excluder, sometimes cells will be started, and sometimes not. Cells will be more sure to be started if the queen be in the first story and brood in the third, with no excluder, and combs with no brood in the second story. Cells started in either way are as good as in a queenless colony, if the force be the same.

6. I think so. But something depends upon the condition of the colony and the time when the queen is removed. If the colony be weak, or if the queen be removed too early, a poor queen is likely to result.

7. If you mean what percent swarm naturally and are regularly hived in another hive, perhaps less than one percent. If you mean how many swarm out and then go back to their own hives, somewhere from 5 to 20 percent. If you mean how many would swarm if left entirely to themselves—in some years 10 percent, and in some years 90 percent.

8. I don't know. If ever that time should come, I'd try to study up on the question, and perhaps try some of several kinds.

Most Gentle Bees—Comb-Honey Hive—Introducing Queens

1. What strain of bees do you consider most gentle and easy to handle?

2. Do you think best to sprinkle bees with water before putting them in the hive when they swarm?

3. Would you use an 8 or 10 frame hive for comb honey?

4. Are hybrid bees as good as pure stock?

5. I have a queenless colony. What kind of a queen do you think best to introduce to them? They are 3-banded brown bees. What method do you advise? WASHINGTON.

ANSWERS.—1. The Caucasians are claimed to be gentlest of all, but reports do not all agree.

2. It is not a general custom, but if there is fear that the swarm will go off, sprinkling will help to prevent it.

3. For the one who does not give very close attention to bees, the larger hive is better; for the one who gives all the attention needed, the 8-frame hive may be better. But in building up before harvest, it will need to be used 2-story sometimes, and that really makes it a 16-frame hive.

4. Sometimes they are better, and sometimes not so good. But even if better, they are more likely to run out than pure stock.

5. Get an Italian queen and introduce by the method given in the instructions that come with the queen.

Increase by Dividing

Can you give me a method of artificial increase as good or better than natural swarming? I have 23 colonies, and would like to increase to 50, if the season is favorable, and have not time to watch them as I would have to do by natural swarming. MINNESOTA.

ANSWER.—Just what is the best way for you is not easy for me to say. It depends something upon your familiarity with bees and their habits. If you have not done so already, get one or more good bee-books and study up on general principles, and then you can judge better than I what course to pursue. My book, "Forty Years Among the Bees," gives perhaps more information upon different ways of artificial increase than any other, but it would be better to have some other book first as a foundation study.

It may be well, however, to mention one way of making increase that may suit you. Ten or 12 days before you think there is danger of swarming, and at a time when honey is yielding well, take from her colony your best queen along with 2 frames of brood and adhering bees, and put them in an empty hive as a nucleus. The bees thus left queenless will start queen-cells. Within 2 or 3 days take from a number of other colonies all their brood but one frame, and put this brood in an upper story over an excluder, leaving the queen in the lower story with her one frame of brood, the rest of the story being filled with empty combs or frames filled with foundation. Ten days from the time your best colony was made queenless, set these upper stories on new stands and give to each a queen-cell from your best colony.

Increase by Driving—Races of Bees—Foreign Bee-Papers

I am a beginner of 2 years standing, or rather "kneeling," because I am all crippled up with rheumatism, so that I am unable to walk without a stick, and have to kneel when working with the bees. I began last season with 2 box-hive colonies and 2 weak nuclei, mismanaged colonies of the season before with bees enough to cover one frame. One of the box-hive colonies swarmed itself to death, or, at least, almost so, for when I transferred it Feb. 20, I found very little honey, no eggs, no brood (not even one capped drone-cell), and about a scant half-gallon of bees, so they must have swarmed at least 21 days before. I increased to 13 colonies, and got from 2 hives which I did not use for increase after the middle of June) about 75 pounds of chunk honey from one, and 56 sections from the other; besides that, the latter being in a divisible 10-frame brood-chamber, and every frame of the upper section of it filled solid with honey, and had, about the week before Thanksgiving, the lower section filled, with the exception of a space about 3x5 inches in 3 frames, that was filled with brood. We had a fine fall flow, the bees gathering up to Sunday before Thanksgiving.

1. I want to double my colonies, which can easily be done as peaches and pears are in full bloom, and although the bees are a little behind last year, they have all from 5 to 8 Langstroth frames of brood, or the quivalent. I also have one colony doubled up and strengthened to 12 frames of brood, to be used to rear drones and queens, the eggs for queen-rearing to come from another queen. To get more increase I can use about 10 box-hives, if I should supply the planter's family with honey and leave the old hives on the place. Now I want to drive these bees as often as possible without ruining them. How often could this be done by putting the old queen back in the box-hive?

2. How long would it take for them to become strong enough for a second drive if I have to run in a virgin?

3. How long would it take if they had to rear a queen themselves?

Now, I don't want a mathematically exact answer, a rough guess will do.

4. I have several bee-books, Root's "A B C," Dr. Miller's "Forty Years Among the Bees," Hutchinson's "Advanced Bee Culture," Cook's "Manual of the Apiary," Doolittle's, "A Year's Work in an Out-Apiary," and a couple of pamphlets, but what all of these books *do not say* about the different races of bees would fill a good-sized book, and *that is the one I am after*. So if you can tell me where to get a book of that kind, in either English or German, you would oblige me very much.

5. I have sent for queens to several queen-breeders and received queens that produced good, hustling workers, but I don't believe I got what I ordered, because I got from one breeder Carniolans, and from another Banats; they both build nice little curtains from propolis about ½ inch back from the entrance, so as to let them enter upwards between the frames, and also below through small openings about ¼x¾ to one inch or so. These curtains or storm-doors have proven to be sure mouse-excluders, but also point strongly to Caucasian blood in those queens. Now I want the coming summer or early fall 2 or 3 imported Banat queens, mailed from the Banat part of Hungary direct to me without being classified; that is, picked over by anybody. If you know of any importer who will do this, please let me know his address, or if you know the address of an Austrian bee-paper where I could find advertisements from exporters (must be printed in German) please let me know. There is a bee-paper

edited in my old country, the Kingdom of Saxony, and if I am not mistaken, the city of Leipzig, that I would like to take if you can tell me its address and subscription price.
MISSISSIPPI.

ANSWERS.—I've studied over your questions several times, and each time the feeling grows upon me that I don't know very much about bees. I might bunch the 3 questions together and answer them by saying "I don't know" which would be only the truth), but you suggest "a rough guess," and surely I can do so much as that, even if it be so rough that you'll need a very coarse file to smooth it. The great trouble is that there are no fixed data to work on—only varying quantities. The strength of the colonies may vary greatly, there's nothing definite about the amount you will drive each time, nor for that matter as to just how strong the driven lot should be. Something depends, too, upon the time of day when you drive. Perhaps it will be better to drive at a time when a good force is out in the fields, and then make a pretty clean drive.

But I'll undertake the guess, leaving the way open for any one to make a better guess.
1. About 3 weeks.
2. About 30 days.
3. About 6 weeks.

I don't know of any book that gives what you want about different races of bees any better than the ones you have.

I'm not so sure that you are right about those "curtain"-builders being of Caucasian blood. The worst gluers ever I had were the so-called Punics.

I will try to give information either in this or next number about the foreign journals you mention, in which you may perhaps learn about the bees in question.

Black, Sticky Substance Around Hive-Entrance

One of my colonies of Italian bees has a black, gummy substance around the entrance, almost entirely closing it. I have to clean it out every day; no other colonies have this. Is there any danger of losing it? Being a novice I would like to know.
DELAWARE.

ANSWER.—It is not likely that the colony is in any serious danger from it, although I must confess I don't know what the trouble is. It may be the droppings of the bees, and it is possible that a larger entrance would be better, if the entrance is much less than a square inch. If it were in the fall I should guess bee-glue, but not in the spring. I never before heard of a case that would need attention every other day.

Splinting Comb Foundation—Uniting Weak Colonies

1. What is the best way to support foundation in the frames, with wire or with splints? and how are splints fastened to the upper and lower bar, or not at all?

2. What is the best way to unite weak colonies? Shall I kill the queen, or will the bees do that?

3. Is it better to unite 2 swarms, and make one big swarm out of 2? and will I get more honey from one big swarm than I would get from 2 small ones?
WISCONSIN.

ANSWERS.—1. Splints are growing in favor. They are better than wire for brood-frames, but wiring is probably better for shallow extracting frames. Splints are pressed into the foundation, and not fastened either to top or bottom bar. Full instructions for fastening are sent with the splints.

2. The bees will destroy one of the queens, but it may be better for the bee-keeper to attend to that job. There will be more peaceful uniting if one colony has been queenless for 2 or 3 days.

3. You will be more likely to get more honey from uniting. In places where a strong flow continues very late, more honey may be had from the two kept separate.

Laying Worker—Young Queens

1. How early in the spring will a colony of bees take a laying worker? I have 5 colonies I put out-of-doors about the first of March, and the bees of one of the hives have died terribly, only about 2 combs of bees left. I ask about the bees taking a laying worker because I expect to find one or more hives without a queen when I look through them, and would rather give them eggs than go to the expense of buying a queen for them.

2. Will they take a laying worker before the queens of the other hives commence laying? I would rather give them eggs from another hive to rear for themselves a queen.

3. Will they take eggs and start a queen after they choose a laying worker? If I understand what a queen of the current year is, it is the queen that is hatched this summer. I saw in Dr. Miller's bee-book that a queen seldom swarms of the current year's hatching.

4. How can a colony swarm the second time without the young queen swarming with them? and if the queen of the current year doesn't swarm, how soon in the spring can one go to overhauling the hives?
ILLINOIS.

ANSWERS.—1. Perhaps 2 or 3 weeks after beginning to fly nearly every day.

2. They may rear a queen from eggs or young brood given them, but it doesn't pay. When laying workers appear on the scene (it may be well to mention that instead of there being a single laying worker as you suppose, a whole lot of them go at the wretched business), all the workers in the hive are pretty old, and most of them will have died off before any young brood can appear to take their places. Indeed, whether there are laying workers or not, it is a poor plan to let a queenless colony rear its own queen in the spring. Generally the queens are very poor. The best thing is to unite the queenless colony with another having a laying queen.

3. In the case of a second swarm, or any afterswarm, a virgin queen goes with the swarm, and of course she is of the current year's rearing. But a *laying* queen of the current year, if left in the hive where she was reared, is almost certain not to swarm.

4. As soon as bees are gathering freely, and the weather is warm enough for them to fly well.

Requeening Colonies—Comb or Extracted Honey?

1. Which is the best way to tell whether a colony is queenless, and needs requeening?

2. Tell me how to go at it in an easy way to requeen colonies?

3. What month would be the best to requeen colonies? I have 21 colonies, and I would like to requeen part of them this spring or summer.

4. Which is the best plan, to run for comb or extracted honey?

5. Which makes most work, to produce comb honey or extracted honey? I guess extracted makes less work for the bees.
MINNESOTA.

ANSWERS.—1. Look and see whether there are eggs and brood present. If not, there is no *laying* queen present, but there may be a virgin queen. Give a frame with young brood, and if no virgin is present queen-cells will be started. Yet sometimes cells will be started even when a virgin is present.

2. There is probably no easier way than the one generally given as instruction that accompanies queens sent by mail. That is, to remove the old queen and put in the cage containing the new one, allowing the bees to liberate the queen by eating out the plug of candy. A safer way is not to let the bees at the candy for 2 or 3 days after the cage is in the hive.

3. June is a good month.

4. For some, comb is best; for others, extracted. You will have to find out which is best for you.

5. Comb honey is generally considered to take more work.

You would find it of great profit to get a bee-book.

Bees Robbing—Using Combs on Which Bees Died —Drone-Comb

1. Since you said that the hives I have need little packing, I unpacked them yesterday. Everything went all right, and I finished my work about 9 o'clock. I took no notice of the bees until after dinner. Then I happened to look at the bees, when, behold! they were robbing one of the hives. They were pouring in and out of the entrance, trying to push into cracks, etc. I shut the hive up, but noticed as I did so a heap of dead bees lying at the entrance of the next hive. At night, or rather towards night, when the bees were all in I opened the hive and found every bee in it dead. They had already begun to rear brood and had it in all ages. Now did the robbers kill the bees, or did they, after their hive was robbed, endeavor to enter the next hive and were stung to death?

2. What caused the bees to rob? I did not scatter any honey or comb, and I removed everything I had used as soon as I had finished.

3. I have several hives now empty which had bees in, but they died during the winter. Now, I would like to know, since one of them contains two frames of honey-dew, can I put a swarm in it just as it is? Another has some candied honey in it. Can I put a swarm in this as it is?

4. If I can, would it be worth while to cut out the drone-comb? The reason I ask this last question is this: I have read that one should never give a swarm a number of already-built combs, for they are sure to build drone-comb in the rest or remaining space. Now if I cut it out won't they build drone-comb again in the same place?
NEW JERSEY.

ANSWERS.—1. I don't know; but robbers are not likely to kill the bees that are being robbed.

2. I don't know what caused the robbing in this particular case, but in general the fault lies with the robbed rather than with the robbers. In most cases, especially in the spring, the colony that is robbed is queenless. Likely this was not the case in the present instance, as you say there was brood in all stages. It may be the colony was too weak to defend itself.

3. It would be all right in case the honey-dew and the candied honey should be used up before winter. But there is some danger that this would not be the case; so it is better to have the combs emptied out before using them for swarms. Let the bees rob them out before the time of swarming, so the honey-dew will be worked into brood. Spray the combs of candied honey with water as often as the bees lick them dry.

4. It is worth while to cut out drone-comb if you patch the holes left with worker-comb or foundation. Otherwise the bees will be pretty sure to fill in drone-comb again.

Sundry Questions

1. What are the latest editions of "Langstroth on the Honey-Bee" and "Forty Years Among the Bees?"

2. How much do you suppose they would charge for ½-pound and 1-pound packages to ship bees? How much a piece without bees in them?

3. What kind of a drone-guard gives the best ventilation, zinc or wire?

4. How would this kind of hive be for the production of comb honey. Frame 15⅛x9¾, 8 in a hive; just one body used for a brood-chamber?

5. How would you like a wood-and-wire honey-board, with just ½ as many slats, and wire to take the place of slats to give more ventilation in the upper story?
ARKANSAS.

ANSWERS.—1. The latest edition of Dadant's Langstroth is 1909; of "Forty Years Among the Bees," 1906. I don't know about the others you name in your letter.

2. I don't know; I don't find them listed in the catalogs. You can find out by writing to the manufacturers.

3. I think the wire.

The other things you ask about I have no practical acquaintance with.

4. The capacity of such a hive would be 72 percent of that of an 8-frame Langstroth. That would be quite too small.

5. Other things being equal, there would be an advantage in the greater openness.

Plans to Prevent Swarming

1. Do you think this is a good plan to prevent swarming? By fastening the young queen in the hive, by putting a queen-excluder between the bottom-board and the hive. If you don't get the right understanding of this, please look on page 179, "Forty Years Among the Bees."

2. I also enclose a clipping from a farm paper of a plan to prevent swarming. Do you think it is a good one to follow?
MINNESOTA.

ANSWERS.—1. If you will read on 2 pages further in "Forty Years Among the Bees," you will see that the plan didn't work well with me, and I wouldn't advise you to try it. I think it would be all right if one had only a single colony, and it might work fairly well in a small apiary; but in a large apiary there is too much swarming and mixing.

2. The plan given in the clipping ought to work successfully; although what works for one is not always sure to work for another. The clipping is this:

"METHOD OF HANDLING BEES.—Every bee-keeper of this locality should attend to his bees in the spring. Such is our way so that when the honey season begins, in each of his hives will be a powerful, strong colony, that means in my locality about the first of June. By May 20th I generally put on a super of extracting frames, no queen-excluder between, so that the queen has free access to the super; and by June 5th, if this colony is very strong, the queen will have at least 5 or 6 frames of brood in this super. The honey-flow here begins about from June 15th to 25th. Then when I see that the white clover is in bloom, I raise this super off the hive and put 2 empty supers on there, a queen-excluder between the hive and the supers, and then take the queen, if she should be in the upper story that I have lifted off, and let her run in at the entrance of the hive, and put on top of the hive, and put on top of this the super with the frames of brood.

"And if there should be any drones present in the upper story I lay a strip of wood across under the cover of this top super with the brood, so the drones can pass out. Then I raise the hive one inch off of the bottom-board, put on a strip of wood between each corner of the hive and bottom-board. This gives ventilation all around. Now some will think, why not make the entrance larger? But I will tell you why this cannot be done, as the bees would build under the frames down to the bottom-board.

"Now then the work for the season is done, except adding more supers to the hive as the honey harvest continues. In this way I have not had any bees to swarm for a good many years, and have had as high as 300 pounds of honey per colony right here in the city of Stillwater. And last year I averaged over 100 pounds per colony, and my bees did not store one pound of honey after July 10th, as the honey harvest was very short here last season."—LOUIS MARKERT, of Minnesota.

Transferring from a Box-Hive

I have a colony of bees in a box-hive. What is the best way to transfer them to a frame hive with the frames in)? And when is the best time to do it—after the swarming season, or now? CANADA.

ANSWER.—You can transfer them in fruit-bloom according to instructions in your bee-book; but nowadays the preference is to wait till they swarm, hive the swarm in an approved hive and set it on the old stand with the old hive close beside it, move the old hive to the other side a week later, and then 21 days after the time the swarm issued break up the old hive, add the bees to the swarm, and melt up the old combs.

Putting On Supers—Transferring, Etc.

1. Since I can get no satisfaction on this subject, I write you now before it is too late. I run for comb honey, and my bee-book, one of old origin, advises having comb honey stored in frames instead of sections. It also advises removing the honey as fast as capped. Now these views are, I think, or rather have been, abandoned, if they ever were held. The new method is, I believe, to put on one super, and after this is half filled raise it and put on another empty one underneath, and continue so until near the end of the flow, then cease the operations, and allow the bees to cap the honey over. R. C. Aikin, in a contributed article in last August American Bee Journal, says practically this: "Don't stretch the colony too far, otherwise you will have a lot of unfinished sections, with few complete ones." He says put on one super, and when another is to be added put it on top, and if the bees enter it in large numbers, and if the flow is good the position of the super may be reversed. Now, how can you tell if there is a flow, if it is a good one; that is, enough to continue to add supers, when to cease adding supers, and when to remove all sections, for I think you advise taking them off at the end of the flow?

2. For one who has asters, goldenrod, and some buckwheat, when is the proper time to remove all supers to allow the bees to get ready for winter?

3. I have a weak colony that is small. I hived them late last year on 2-inch strips of foundation in the brood-chamber. They did not half fill the chamber below with comb, but I fed them and they wintered all right. They are rearing brood like the others, and I would like to know how I could build them up for the honey-flow.

4. I think Aikin, in his article, which was mentioned before, tells you to take note of the honey-flow by watching the brood department. Now I would like to know if he pries off two or three supers in order to look down below. I would have to smoke the bees to such an extent that after I did I would not be able to find out anything.

5. In transferring you advise us to do it during the swarming season. You say "Wait until the colony has swarmed, hive the swarm, set it in the place of the old hive with the old hive near by, and 21 days afterward break up the old hive." You do this in order to have all the worker-brood hatched out, but why doesn't the queen continue to lay, or is it perhaps because all the bees go to the swarm? Wouldn't the queen with the hatching brood make a swarm?. What is done with this brood, or rather, the young bees, after the old hive is broken up?

6. When bees swarm you say hive the swarm, place it in the place of the old hive close by, and a week later move the old hive away to its future place. If you follow this plan, will the old colony store any surplus? If not, will the swarm make up for it? NEW JERSEY.

ANSWERS.—1. Unfortunately it's a matter of more or less guessing. When the flow begins to let up, you will see a let-up in the activity of the bees. The plainest sign of the let-up of the flow, however, is generally the crossness of the bees, and their trying to rob. You can tell something by the appearance of the plant upon which the bees are working, as to whether the bloom is disappearing. But sometimes the let-up is only temporary. In a clover harvest the bees may for some reason stop storing for 3 or 4 days, and then begin again as fiercely as ever.

2. The bees are likely to take care of that matter themselves. Brood-rearing will gradually become less, and the cells left empty in the brood-chamber will be filled with honey, so that although you may leave the supers on until the flow ceases you will find the brood-chamber heavy with honey.

3. You can give them help from a very strong colony, say one that has 6 or more frames of brood. It will not pay to help them from a colony that is not itself very strong. You may shake the bees from a frame of brood in front of the hive, when the younger bees will run in and strengthen the colony; you may exchange one or more frames of younger brood for one or more of riper brood; or you may give to the weak colony from the strong colony a frame of sealed brood with adhering bees, perhaps repeating this after two or more days.

4. I don't understand how smoking the bees will prevent you seeing the condition of matters in the brood-chamber, even if you use so much smoke that the bees get to running like a flock of sheep. But there is no need to use so much smoke. Just enough smoke to keep the bees from flying out at you will allow you to lift off the supers and leave the bees as quiet below as if they had not been disturbed, or at least almost as quiet.

5. The queen does continue to lay in the swarm; but there is no queen in the old hive, only a queen-cell, and the young queen that hatches out of the queen-cell will not have much brood before the end of the 21 days, when all the bees from the old hive may be added to the swarm. Or, combs and bees may be transferred, and continued as a separate colony.

6. Unless the season is very good there will be little or nothing stored by the mother colony, but the swarm will store more than both would have stored if the swarm had been put on a new stand and the mother colony left on the old stand.

A Bunch of Ten Questions

1. Will queenless bees store honey?

2. Does the black bee enter the supers more readily than the Italian?

3. Will a 4-frame nucleus formed May 8 make any surplus honey if the season is good, and if the rest of the hive is filled with full sheets of foundation?

4. Is May 1st too early to have queens sent from Arkansas to Illinois?

5. Some of my neighbor bee-keepers claim the Carniolan bee is superior to the Italian. Do you think it would be wise for me to buy Carniolan queens, for mine are all black?

6. What is the difference between 3-banded Italian bees and the red clover bees?

7. How would it do if bees are run for extracted honey, to make a specialty of it and nothing else?

8 A strange thing happened to me last year. I had 5 colonies of black bees; 2 of them came out in the spring strong, and the other 3 weak. I thought I would run the 2 strong ones for honey, and the weak ones I would divide after they had built up; but, to my great surprise, the strong ones began swarming May 20; each colony swarmed 3 times, and I caught one stray swarm of yellow bees with some black ones as cross as hornets. The 3 weak colonies I spoke of stored 175 pounds of salable comb honey, and none of them swarmed. How would you account for this? The 2 strong colonies did not store any honey.

9. What kind of bees are the yellow ones, with black ones in with them, that are crosser than my blacks? When I hived them I wore a black hat, and when I got through the crown of the hat was almost white with stings.

10. How do so many keep bees without the American Bee Journal? I can't understand how they do it. ILLINOIS.

ANSWERS.—1. Yes, indeed.

2. I think so; but I have no trouble with Italians.

3. Yes, if strong enough to have 3 of its frames well filled with brood.

4. I wouldn't care to have queens of this year so early, but last year's queens would be all right.

5. The Carniolans would probably be quite an improvement on the blacks, but I would rather risk Italians.

6. There may be no difference, and there may be a good deal of difference. The 3-banded Italian is the kind that comes from Italy, and a red-clover queen is any one whose bees work more than the average on red clover.

7. It's all right to make a specialty of either; although some think it better to produce both kinds in the same apiary.

8. That's not a very hard question, after all. The strong colonies split up their strength by so much swarming, and the weak colonies kept all their strength together. If you had limited the strong ones to a single swarm each, you probably would have had a nice surplus from them. Next time try it this way: Put the swarm on the old stand and set the old hive close to it; then about a week later move the old hive to a new stand. Then you'll be likely to get a fair yield from the swarm.

9. They are hybrids, or a cross between blacks and Italians.

10. Neither can I.

Reducing Hive to One Story—Looking for Queen-Cells—Queens Disappearing

1. How do you select the frames of brood when reducing to one story—page 130, "Forty Years Among the Bees;" that is, if a 2-story colony had, say 5 frames of capped brood, 5 of hatching brood, and 2 frames of eggs, which would you select 8 frames from to leave on the old stand? Also, reason why?

2. Do you shake the bees off the combs when looking for queen-cells? If so, do you shake the bees on the ground or upon the tops of the frames in the hives? My bees seem to try to hide cells by clustering in bunches.

3. On returning the queen after giving your foundation treatment (page 186), do you shake her off with the rest of the bees that were in the lower story, and let her run in that way, or do you catch her and let her run down between the frames?

5. I had some trouble with queens disappearing last season in using the foundation plan. The first few colonies that I worked made me scratch my head for a few days following, for, upon examination I found that they were plugging up the old brood-nest with honey. "That won't do," I said; "I want the honey in the sections." But when I returned the queen, gee! didn't they turn out comb honey though! I quit scratching my head, and commenced to rustle up more supers, saying in the meanwhile, "Guess Dr. Miller knows his business."

The prospect for a good season this year is very bright; it was fearfully dry for a month or more, and things looked decidedly bad for the bee-men, but rain came at last, and lots of it. CALIFORNIA

ANSWERS.—1. Most years there will be some colonies at the time of reducing to one story which can take one or more frames of brood. In that case the ripest brood will be taken for those colonies that need strengthening. In a year such as the present promises to be, in which there will be more brood in the apiary than can be contained in one story for each colony, then the brood least advanced is taken away. The general idea is that the most advanced brood is to be left under honey-supers, and where brood is taken from a stronger to be given to a weaker, the weaker needs the better brood.

2. Sometimes the combs are looked over without any shaking, for if cells are in the hive at all, one is not likely to miss them all. But if a single cell is found, then it is hardly safe to omit shaking all the combs. Just

how the shaking is done depends upon circumstances. If the queen is to be found, she must be found before any shaking is done, and the frame she is on set out of the hive, for if a single frame be first shaken, then it's good-by to finding the queen. After the queen is out of the hive, the bees may be shaken on the ground, on top of the frames, or into the hive between the frames. If the queen is not to be found, the bees are shaken on the top-bars or into the hive between the frames.

3. The queen may be caught and placed on top of the frames, but that is not the very best way, for sometimes she will run over the frames for some time before going down between them, and it is possible that she may run over the side of the hive, or that the bees may start to chase her. In all cases where a queen is to be returned to her own bees, the safe way is to take one of the frames of brood on which she is to be, together with its adhering bees, hold or lay the frame flat, and let the queen drop directly upon the middle of it.

4. I've had trouble, too, with queens disappearing, so I've changed my practice. Instead of putting foundation below, I now put to one side in the lower story a frame with a little brood in it, perhaps a frame of pollen, and beside it 2 empty frames. When I say empty I mean empty. Not even a starter of any kind in the frames. That frame of pollen or honey with perhaps some brood will satisfy the queen better than frames of foundation, and the entirely empty frames will have very little comb built in them, which will generally be broken out for wax. I'm sure you'll like the change.

Requeening—Using Combs of Honey—Tramp Swarms

1. Can you requeen with young queens by killing or removing the queen that issues with a prime or first swarm, and letting the swarm return, then in 6 days it will issue again with a young queen? Is that a good plan to requeen?

2. I took my bees out of the cellar the night of the 24th, and they are now piling in the pollen. I saved several combs of honey for feed, but the hives are as heavy, apparently, as when I put them in—they don't need feed. What can I do with the combs? If I keep them to give to young swarms, how can I keep them? I put 37 colonies in last fall, and took out 37 this spring, but one flunked after taking out, but had plenty of honey.

3. Is it safe to take in tramp swarms, or is there danger of getting foul brood? IOWA.

ANSWERS.—1. It's an old-fashioned way and works well. If you want to increase by one colony, hive the swarm that issues with the virgin, set it on the old stand, and set the old hive 10 feet or more distant on a new stand. If you don't want any increase at all, return to the old hive the swarm each time it issues. But you may have to do that a number of times.

2. For some time they will be all right in a cool cellar, for worms will be slow at beginning work there. The safest place is to put under full colonies. One strong colony can take care of 3 or 4 stories. Put a story under, and 2 or 3 days later put another over the under one, and later still put another over the last, each time putting the new story up next to the story containing the colony.

3. There is danger if there is foul brood near you.

Weak Colonies—Using Empty Hives Where Bees Died—Age When Queen Lays

1. How will it do to change a weak colony with a strong one during the honey-flow in the afternoon? Will there be any danger of the home-coming bees killing the queens?

2. I reduced 26 colonies to 18 last fall, being in 8-frame dovetail hives. Almost one-third of the bees in each of the 18 colonies were frozen to death from the cold, long winter. I reduced those 18 to 11 this spring, and they are now in pretty fair shape. I have now 19 empty dovetail hives with drawn-out combs; how can I keep them so the moths won't get in them? Will it be all right to set one empty drawn-out comb hive under each of the 11 colonies?

3. If I work it that way will the bees swarm as usual, or can I shake them in the lower hives during swarming season, and place the new one on the old stand, and move the old one away?

4. I run for section honey. Which will be the most profitable, have those 11 colonies swarm to fill the 19 empty hives with drawn comb, or let each swarm once? It is as good a prospect for the white clover as there ever was.

5. How long will it take after a queen is mated with a drone before she begins to lay eggs? MISSOURI.

ANSWERS.—1. Yes, there will be some danger.

2. No safer way than the one you suggest. You can put 2 stories under each, but it will be better to have only one under for a few days, and then put the second one *between* the full and the empty story?

2. If you leave them that way the bees may not swarm at all, but your plan of shaking may work all right. In any case only one story should be left at the time of putting on sections.

4. You will get a good deal more honey to let them swarm only once.

5. About 3 days.

Italian vs. Banat—Untested Queen

1. Which is the better bee, the Italian or Banat, as to honey-gathering and hardiness?

2. Is an untested queen pure stock?

3. Would it be advisable to introduce an untested queen into a strong colony? PENNSYLVANIA.

ANSWERS.—1. I have no practical acquaintance with the latter, and they are not yet as well known as Italians.

2. She is supposed to be of a pure mother, but being yet untested it is uncertain whether she has mated with a pure drone or not.

5. Certainly, if the likelihood is that the new queen is in any way better than the one whose place she is to take.

Reports and Experiences

Bees Doing Nicely—Heavy Losses

We have nice spring weather. Fruit-trees are in full bloom. Bees are doing nicely—that is, what is left of them. We have had heavy losses. W. H. LEACOCK.

De Witt, Nebr., April 10.

Swarming in April in Indiana

Much natural swarming is being reported in central Indiana in April. It is rather unusual for this early date. The cold spell apparently has had no bad effect on strong colonies, and the white clover is luxuriant. WALTER S. POUDER.

Indianapolis, Ind., April 26.

Bees Doing No Good

I have 400 colonies of bees in 10-frame hives, and up to this time they have done no good. It has been so wet that bees couldn't work; but things are looking fine now. I have had 6 new swarms today. I hope we will have better times later on. My bees did fine in 1909. J. R. FURLONG.

Belcher, La., April 23.

Wintered All Right—Blossoms Frozen

Last year I had only 2 colonies of bees. I did not get any honey, and had to feed one of them last fall. They wintered all right, and are doing well, although the blossoms are all frozen off; but dandelions are plenty. I hope to increase some this summer.

Galva, Ill., May 2. P. A. CARLSON.

Some Colorado Conditions

I don't suppose you have heard from the Western Slope this spring, so I will tell of the conditions. We had the hardest winter since bees have taken the place of the Indians—6 weeks without a flight. I feared they would all die, but my loss was much less than I expected. They swarmed late last season, and the second crop of alfalfa yielded no honey, so the late swarms gathered but little honey. I fed some, and doubled the rest, but did not gain in count—have the same number now as last spring. I am feeding a few to keep them alive. Spring is a month earlier here than last year. We have a few flowers, and bloom on early peaches and apricots, and cottonwood bloom. I hope the trouble is nearly over, and that we will have a better honey crop than last year. E. C. WRIGHT.

Montrose, Colo., April 6.

Cold Weather—Poor Crop in 1909

We have had a cold spell of weather since April 15th. The bees are in good condition. I wintered 20 colonies in the cellar. They started to bring in pollen the same day. I hope there will be a good crop of honey this year. There was a very poor crop of honey here last year, as it was too dry.

HENRY F. PISCHER, JR.

Granton, Wis., April 23.

Early Swarms in the North

I was surprised with a swarm of bees yesterday. Even making allowance for the early spring, it is quite an item for north central Wisconsin. If any one in the northern half of the State can tell the same story, I would like to hear of it. A. FRASER.

Chili, Wis., April 28.

[Mr. Charles Busche, of Elgin, Ills., reports a swarm there after April 28th.—ED.]

Honey-Dew on Grass

I noticed an item on the secretion or excretion of honey-dew. April 7, 1910, there was a heavy honey-dew over the grass in the pastures. All the bees went wild over it. Neither the oak nor the hickory trees were in leaf—nothing but elms and soft maples.

We had a dry spring up to April 15th. I live in a prairie country. I would like to have a scientist explain as to the honey-dew referred to. A. W. SPRACKLEN.

Cowden, Ill., April 16.

Foul Brood and Tramp Swarms

I see the question is asked, "Is it dangerous to take a tramp swarm?" My answer would be, it is dangerous if hived on drawn-out combs; if hived on comb foundation, and the foundation taken from them after 4 days, it is safe.

My record shows that colony No. 13 swarmed May 30, 1909, and the swarm was put into hive No. 48. July 14, I found foul brood in No. 13, and Sept. 2 found foul brood in No. 48, which was hived on drawn-out combs. I gave them both the McEvoy treatment, and examined them both April 30, 1910, and found them in a healthy condition.

J. G. CREIGHTON.

Harrison, Ohio, May 1.

Prevention of Swarming

I see so much in the different bee-papers on prevention of swarming, and some of it does not appeal to me as being good common sense, so I will tell, as briefly as possible, a method which orginated in my mind in the early spring of 1909, and which worked like magic.

Just previous to the time, when, in my judgment, the bees would start queen-cells preparatory for swarming, I went carefully, and, as I often used to term it, tenderly through each of my hives, stacking each super one by one to one side, and away from the hive-stand, placing a new bottom-board, and a new first super instead of giving said first super a full set of clean, empty worker-combs. If I found a queen I caged her for a few moments; if not, I took my chances on getting through without injuring her.

Placing a weighted down newspaper in front of the newly-arranged super, I begin shaking off and brushing each comb on this paper, and letting them crawl in at the front entrance just as I would hive a swarm. I endeavored as nearly as practical to place all brood in the top super, even with a 3-supered hive. My reason for this was to get it as far from Her Majesty as possible, thinking to give her a new start in business, believing that it stood to reason that they would abandon all idea of swarming for a while, at least.

As I got the combs clean of bees I rebui the hive, giving it as near its original appearance as possible, and if a queen had been caged I then let her run into the front entrance, shut up the hive, and gave them a decent letting alone. In many of the hives, consisting or 130 or more, capped queen-cells were plentiful. By the time I had thus treated all my colonies, the black sage honey-flow was upon me in full blast. I quickly proceeded to go through each hive, and if I found any number of frames sealed up from one up I extracted that, or them, as the case was; and as soon as I was over the apiary, I returned to the beginning point and did likewise until the honey-flow was at an end. However the case may be, all the capped queen-cells were at once cut down, and while this whole Southern California was over-run with what I will call a swarming epidemic, I did not have a swarm during the season. I am now manipulating in a little different way, but practically along the same line, and whatever the result may be will be offered to the Old Reliable for publication in due time. C. L. GRIGSBY.

El Casco, Cal., April 6.

Bad Weather for Queen-Breeders

We are having the coldest, stormy weather I ever saw at this season of the year. It snowed Saturday, Sunday and Monday, with cold wind and rain since then. All tender vegetables, fruits, corn, etc., are killed. This has interfered fearfully with queen-rearing. I have worked as best I could, making nuclei in the snow, with bees crawling under my clothes and chilling on the ground. I prepared queen-cells in a warm room by the fire, using a lamp with a reflector to select the larvæ, JOHN M. DAVIS.

Maury Co., Tenn., April 27.

We have had winter here for several days. It is still snowing this morning, with snow 3 inches deep. All the flowers and every green thing is killed, or I suppose will be before it is over. We were compelled to open our cell-building hives to look after queen-cells, with snow falling in the hives. We were getting in full shape for the queen-business before the storm came on, but we can't tell what the outcome will be, and we are now prepared to get out 1000 cells every month, if this spell of winter weather does not upset all of our plans. T. S. HALL.

Pickens Co., Ga., April 25.

Bees and Poultry—A Happy Combination.—Many of our readers unite poultry culture with bee-keeping, to the advantage of the home table and the family funds. We have lately found a very valuable help for poultry keepers. This is Dr. A. A. Brigham's new book, "Progressive Poultry Culture." The book begins right. It gives first a sensible standard for the poultryman and his business. By studying the first chapter any one can promptly decide whether he is capable of making chickens pay or not. Next, the volume gives the science and best methods of practice in breeding fowls for a purpose. Incubation and Breeding are then treated in a clear, common-sense way, showing how to succeed and what to avoid. In growing the chicks after brooding age, Dr. B. especially advocates and fully explains the colony system, giving free range. The chapter on feeding, including the balancing of rations, is the best we have seen in print. Parasites and diseases, preparing poultry products for market, systems of selling, advertising, accounting, exhibiting, scoring, etc., are very practically handled. Housing and fencing are given a whole chapter, and the book is closed with a very careful consideration of practical methods of management. It is a good guide for the beginner, and a very valuable assistant of the veteran in chicken culture. It is well worth the price, $1.50, postpaid. Bound in cloth, 293 pages. We club it with the American Bee Journal one year—both for $2.00. Send all orders to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.

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The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

Please mention Am. Bee Journal when writing.

"The Honey-Money Stories"

This is a 64-page and cover booklet 5¾ by 8½ inches in size. Printed on enameled paper. It contains a variety of short, bright stories, mixed with facts and interesting items about honey and its use. It has 31 half-tone pictures, mostly of apiaries or apiarian scenes. It has 3 bee-songs, namely: "The Hum of the Bees in the Apple-Tree Bloom," "Buckwheat Cakes and Honey," and "The Bee-Keeper's Lullaby." It ought to be in the hands of every one not familiar with the food value of honey. Its object is to create a larger demand for honey. It is sent postpaid for 25 cents, but we will mail a single copy as a sample for 15 cents, 5 copies for 60 cents, or 10 copies for $1.00. A copy with the American Bee Journal one year—both for 80 cents. Send all orders to George W. York & Co., Chicago, Ill.

Langstroth Book "Special"

We have just a few copies left of the book, "Langstroth on the Honey-Bee," of the edition just preceding the last. It is practically equal to the latest edition, and we will mail them so long as they last, for 90 cents a copy. (The regular price is $1.20.) Or, we will send one of the above 90-cent copies with the American Bee Journal one year—both for $1.75. Address the American Bee Journal office.

Send For This Book

All of our readers who are thinking of buying a carriage, wagon or set of harness in the near future ought to write to the Elkhart Carriage & Harness Mfg. Co., at Elkhart, Ind., and ask for one of their new 1910 catalogs This company has been manufacturing vehicles and selling them direct to the user for thirty-seven years and are by far the largest manufacturers in their line doing business this way. Their success is wonderful, but it only goes to show that honest goods at honest prices are always appreciated. This firm knows how to get up a book so as to give a prospective buyer an accurate knowledge of what they have to offer. Going through their catalog is as good as a trip through their factory. Everything is illustrated with the finest half-tones, made direct from photographs. They picture each particular feature and describe it so clearly and completely that there is nothing left to the imagination. When you order a job from the Elkhart catalog, you know just what you are going to get. Besides they give you a two years' guarantee on every vehicle they sell, and a guarantee from such a company means what it says Get one of these books before you buy elsewhere anyway.

Crown Bone Cutter

Hens fed cut green bone lay more eggs. Get a Crown Bone Cutter. Send to-day for catalogue.
Wilson Bros., Box 814, Easton, Pa.

BEST MADE
Lowest in Price

Don't Throw It Away—Sell It!

I Will Give You a Classified Ad Free

If you have any implements, or buggies, or engines or separators, that you are not using, do not let them go to waste—they represent money. Sell them; if you are through with them, let someone else get the good out of them; let someone buy them from you—don't throw them away. If you want to sell the farm, or if you have breeding stock of any kind—Poultry, Hogs, Cattle or Horses—let people know about it. Among our 100,000 readers, stockmen, farmers, poultrymen, bankers, you are nearly sure to find a buyer for anything, and I will write a classified ad for you and publish it in two issues of Farm and Stock—all FREE. All you need to do is write me a description of whatever you want to sell, and tell me the price.

Sample Advertisements

Live stock breeders are familiar with advertising. Others may wish to know more about the ads.

Just turn over to the Classified, or small ads, in this paper, and you can see what I am offering you. You can't afford to miss this Free Ad. Sell the farm or at least get a neat sum for secondhand articles. Economize, don't let things go to waste—

SELL THEM!

Here are people who have accepted my offer—the ads brought them from $10.00 to $40.00

Fredonia, N. Y., March 24th, 1910.

Gents: In reply to your kind favor would say, that I have had very good results from my advertising in Farm and Stock. I have sold $40.00 in eggs and cockerels. Yours truly, IRA P. WATSON.

Springfield, Ohio, March 23rd, '10.

Dear Sirs: As to my ad in Farm and Stock, well, I received quite a number of orders through it, and am well pleased with the ad. Yours truly,

COL. JOSEPH LEFFEL.

Carthage, Mo., March 22d, 1910.

Dear Sirs: Since I commenced my ad in Farm and Stock, I have sold the last surplus Rose Comb R. I. Red I had, so please discontinue my ad. Yours respectfully, D. J. BLISS.

Now, my offer is a **Classified Ad Free Two Times** to all who will subscribe to Farm and Stock for one year at $1.00. Our paper is a splendid Farm Magazine, well known everywhere and especially good on Corn, Live Stock Breeding and Feeding, Markets, Dairying, Draft Horses, Women's Department, Poultry, Bees, Fruit, Sunday School Lessons, Editorials, etc. It is profusely illustrated and very handsomely printed—a very valuable and interesting agricultural journal in every way.

Now just look around the farm and see what ought to be turned into cash at once. Or list the farm, or stock, or anything you like. These letters show you that one man got back $40 in cash in a few weeks. The ad was Free—he simply ordered Farm and Stock. Now I will do the same for you. Just order Farm and Stock one year—it stops promptly when time runs out. Write me a full description of article for sale, and I will make up the ad.

CATCH THE NEXT ISSUE

Send dollar bill, or money order for subscription. Not a farmer in America but has something he would like to sell and someone else would quickly buy if they knew of it. Just let me advertise it for you now. This offer is so good that I will even agree to return your dollar if you are not highly pleased with the paper after reading two issues. Address me personally today.

F. J. WRIGHT, President Farm & Stock Pub. Company
Box 44. ST. JOSEPH, MISSOURI

Please mention Am. Bee Journal when writing.

50,000 Copies "Honey as a Health-Food" To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

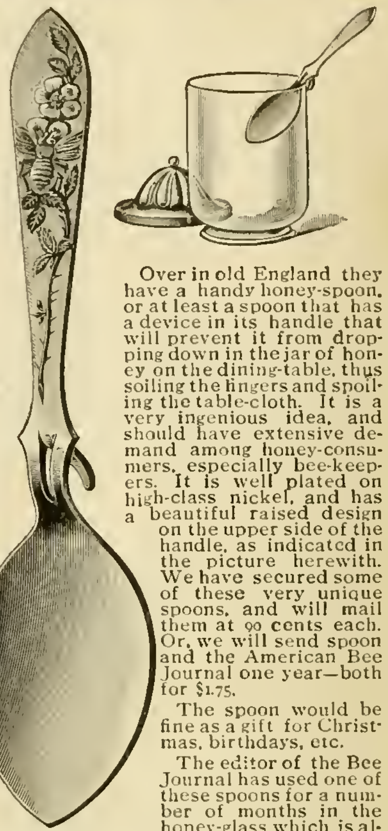
The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed free at the bottom of front page on all orders for 100 or more copies.

Address all orders to

GEORGE W. YORK & CO., Chicago, Ill.

An English Honey-Spoon



About three-quarters size.

Over in old England they have a handy honey-spoon, or at least a spoon that has a device in its handle that will prevent it from dropping down in the jar of honey on the dining-table, thus soiling the fingers and spoiling the table-cloth. It is a very ingenious idea, and should have extensive demand among honey-consumers, especially bee-keepers. It is well plated on high-class nickel, and has a beautiful raised design on the upper side of the handle, as indicated in the picture herewith. We have secured some of these very unique spoons, and will mail them at 90 cents each. Or, we will send spoon and the American Bee Journal one year—both for $1.75.

The spoon would be fine as a gift for Christmas, birthdays, etc.

The editor of the Bee Journal has used one of these spoons for a number of months in the honey-glass which is always on his table, and he would not like to be without this spoon again, as it is so convenient, and also unusual in this country. We can fill orders promptly now. You certainly would be pleased with this honey-spoon, and so would any one to whom you might present it. Send all orders to,

GEORGE W. YORK & CO.,
146 W. Superior St., - CHICAGO, ILL.

MINK TRACK

INFORMATION

On Woodcraft and Nature

Is always fascinating to him who loves hunting and fishing especially. There are many enjoyable and profitable facts that you should know about the great **OUT O'DOORS** where health, pleasure and profit abound. Do you know of the habits, value and methods of taking fur bearing animals, in your own locality? Also about Steel Traps, Snares, Scents, Deadfalls, Trapping Secrets, Raw Fur Market, Coon Hunting, Fox Chasing, Hunting Dogs, Big Game Hunting, Wild Fowl Shooting, Fishing, Prospecting, Camping, Guns, Ammunition, Ginseng and Golden Seal Growing, Fur Farming, Bee Hunting, etc. Some of these are **Great Source of Profit** On the Farm During the Winter. You will find these topics all dealt with entertainingly and authoratively in that splendid 160 to 200 page, illustrated monthly magazine

HUNTER - TRADER - TRAPPER

IT IS ALONE IN ITS CLASS.

SPECIAL:--

Send 10c. to this office and get a sample copy of the H-T-T, also a 64 page book of Interesting Information, containing late Game Laws, etc.

OPOSSUM TRACK

FOX TRACK

MUSKRAT TRACK

North-West Breed!!

HARDY GOLDEN and RED CLOVER ITALIAN QUEENS

I believe Bee-Keepers of the North-West and Pacific States appreciate the fact that **Reliable Queens** can be secured near home. We thank one and all for the liberal patronage given us in the past.

As the Queen-Rearing Business of Sires Bros. Co. is now owned by myself, I want to furnish you as GOOD QUEENS and better, if possible this season.

By fair and honorable dealings, and GOOD QUEENS, I hope to secure the patronage of all wishing to secure a Superior Stock of Bees. Order now. Delivered when wanted:

Select Untested, $1 each; 3 for $2.75; 6 for $5.; doz., $9.50.

Tested, $1.50 each; 3 for $4.25; 6 for $8.00; doz., $14.00.

Select Tested, $2 each; 3 for $5.75; 6 for $9.25; doz., $16.00.

Untested Queens ready May 1st.

Tested Queens ready to mail any time.

Price-List Circular of Queens, Nuclei, Bees by the Pound, etc., on Request.

Virgil Sires, NORTH YAKIMA WASHINGTON.

Please mention Am. Bee Journal when writing.

Swarming Prevented

A new method, just published, worthy of investigation by all progressive bee-keepers. Advantages claimed for the plan of treatment. No clipping of queens' wings—no caging of queens—not even necessary to look for queens; no pinching of queen-cells—no shook swarming—no dividing—no extra expense connected with the plan—plan simple and easy to carry out—satisfactory honey crop—saves time and labor. Send to

Dr. H. JONES, Preston, Minn.,

for his booklet, describing his method of treatment. Price, 25 cts. Process protected by copyright.

Please mention Am. Bee Journal when writing.

National Bee-Keepers' Association.

(Organized in 1870.)

Objects.

1. To promote the interests of bee-keepers.
2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

Membership Dues.

One dollar a year.

Officers and Executive Committee.

President—GEORGE W. YORK, Chicago, Ill.

Vice-President—W. D. WRIGHT, Altamont, N. Y.

Secretary—LOUIS H. SCHOLL, New Braunfels, Tex.

Treas. & Gen. Mgr.—N. E. FRANCE, Platteville, Wis.

Twelve Directors.

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E F. Atwater, Meridian, Idaho.
R. A. Morgan, Vermilion, S. Dak.

Are YOU a member? If not, why not send the annual dues of $1.00 *at once* to Treas. France, or to the office of the American Bee Journal, 116 W. Superior St., Chicago, Ill.? It will be forwarded promptly to the Treasurer, and a receipt mailed to you by him. It is the desire of the officers to increase the membership to 5000 by the end of 1910. Every progressive bee-keeper should be a member of this, the greatest bee-keepers' organization in America.

Hand's HANDSOME HUSTLERS

Are a superior honey-gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large, beautifully marked bees. Warranted, $1.00 each; six, $5.00; dozen, $9.00. Tested, $1.25; six, $6.50; dozen, $12.00. Three-frame nucleus, without queen, $3.25; add price of queen wanted. Don't take chances. Get the real thing. Send for circular. 4A4

J. E. Hand

Birmingham, Erie Co., Ohio

Please mention Am. Bee Journal when writing.

How About Your Advertising?

Have you anything to sell? Any bees, honey, hives, or anything else that you think the readers of the American Bee Journal might want to buy? If so, why not offer it through our advertising columns? See rates in the first column of the second page of every number of the Bee Journal. We try to keep our columns clean and free from any dishonest advertising. Such can not get in, if we know it.

We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

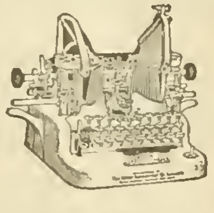
Alfalfa Honey

New Cans and Cases — Fancy Light, 8 cents a pound; Fancy Amber, 7 cents a pound, f. o. b. New York, in not less than 5-case lots. Will shade prices on larger quantitfes. Shall be glad to send samples.

HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

Please mention Am. Bee Journal when writing.

17 Cents a Day Buys an OLIVER



SAVE YOUR PENNIES AND OWN

The OLIVER Typewriter

The Standard Visible Writer.

Can you spend 17 cents a day to better advantage than in the purchase of this wonderful machine?

☞ Write for Special Easy Payment Proposition, or see the nearest Oliver Agent.

THE OLIVER TYPEWRITER COMPANY
47-55 Dearborn St.,
CHICAGO, - ILLINOIS

Please mention Am. Bee Journal when writing.

Not Cheap Queens, But Queens Cheap

Prices of 3-Band Queens	1	6
Untested Queens	$ .75	$ 4.20
Tested Queens	1.00	5.70
Breeder's Queens	5.00	

Golden or 5-Band Queens	1	6
Untested Queens	$ 1.00	$ 5.70
Tested Queens	1.50	8.70
Breeders' Queens	10.00	

3-Band Nuclei	1	6
One-frame, Untested Queen	$ 1.75	$11.20
Two " " "	2.25	13.20
One " Tested "	2.00	11.70
Two " " "	2.50	14.70

5-Band or Golden Nuclei	1	6
One-frame, Untested Queen	$ 2.00	$11.70
Two " " "	3.00	17.70
One " Tested "	2.50	14.70
Two " " "	3.50	20.70

Reared from the best 3 and 5 Band Red Clover Italian Breeder Queens.

☞ DIRECTIONS FOR BUILDING UP WEAK COLONIES—10 cents.

W. J. Littlefield, Little Rock, Ark.

Please mention Am. Bee Journal when writing.

We have a Car of

! California Extracted Honey !

which we offer at 6¾ cents per pound. Samples on request

C. C. CLEMONS PROD. CO.
2Atf KANSAS CITY, MO.

Please mention Am. Bee Journal when writing.

BEES, NUCLEI, and QUEENS

For many years I have been selling bees and queens, and guaranteeing satisfaction in every way. I will be in the business more extensively than ever during the season of 1910. I have mailed queen-bees practically all over the world. My prices the coming season will be as follows, for **Italian**

BEES

Full colonies with Tested Queens, in 8-frame Langstroth hive, $7.00 per col.; in same hive with 10 frames, $7.50. Colonies in lots of 5 or more, 25 cents per colony less.

NUCLEI

One 3-Hoffman-Langstroth-frame Nucleus, $2.50; in lots of 6 or more at $2.25 each; price of queens to be added. Orders for nuclei filled about May 10th to 15th, and thereafter.

QUEENS

Tested Italian, each $1.50; 6 for $7.50; or $13.00 per dozen.

I have 50 choice Italian breeding-queens, either golden or leather-colored, at $2.50 each. "First come first served."

Untested Queens After May 15

Italian (warranted) 75 cents each; 6 for $4.00; or $7.50 per dozen. Carniolan or Caucasian at the same prices.

If you have never had any of my Bees or Queens, you should give them a trial. Satisfaction guaranteed. Address all orders to

ARTHUR STANLEY,

DIXON, LEE CO., ILL.

Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 90c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2A9t

S. F. Trego, Swedona, Ills.

ADVANCED BEE-VEIL

—POSTPAID—

All Cotton, 50c; Silk Face, 60c; All Silk, 90c

Made of Imported French Tulle Veiling; cord arrangement which permits wearer to handle bees in shirt-sleeves with no chance of bees crawling up and under veil. With a hat of fair-size brim to carry veil away from face, you are as secure from stings, movements as free and unrestricted, and as cool and comfortable as you would be at a summer resort.

Please send me two more bee-veils. I have tried all kinds, and yours are best of all.—N. E. France, Platteville, Wis.

Editorial Comment in Bee-Keepers' Review:—The Advanced Bee-Veil is something I have worn with great comfort the past few weeks. The peculiar feature of the veil is, the edges are held down firmly on the shoulders away from the neck. This does away with all chance of stings, and the hot, suffocating, uncomfortable feeling found in other veils that are tucked in close about the neck.—W. Z. Hutchinson.

A. G. Woodman Co., Grand Rapids, Mich.

§ Caucasians, Carniolans, Banats, Cyprians §

Select untested queens, $1 each; 5 for $4. Imported breeding queens, $5 to $6. Send to original importer and get genuine stock. **FRANK BENTON, Box 17, Washington, D. C.**

QUEENS

An improved superior strain of Italians is what **Quirin-the-Queen-Breeder** rears.

Our stock is Northern-bred and hardy.

Our five yards Winter on Summer stands with practically no loss.

One of our customers tells us he has become one of the largest honey-producers of the West, and says that in a great measure his success is due to our stock.

Prices before July 1	1	6	12
Select queens	$1 00	$ 5 00	$ 9 00
Tested queens	1 50	8 00	15 00
Select tested queens	2 00	10 00	18 00
Breeders	4 00		
Golden 5-band breeders	6 00		
2-comb nuclei, no queen	2 50	14 00	25 00
3-comb nuclei	3 50	20 00	35 00
Full colonies on 8 frames	6 00	30 00	

Colonies and Nuclei, if shipped before June 1st, add 25 percent to above price; also add the price of whatever grade of queen is wanted with same. Safe arrival guaranteed.

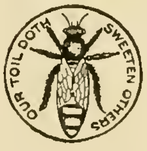
Quirin-the-Queen-Breeder, Bellevue, O.

Please mention Am. Bee Journal when writing.

Celluloid Queen-Buttons

These are very pretty things for bee-keepers or honey-sellers to wear on their coat-lapels. They often serve to introduce the subject of honey, which might frequently lead to a sale.

Note.—One bee-keeper writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of these buttons], as it will cause people to ask questions about the busy bee, and many a conversation thus started wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."


OUR TOIL DOTH SWEETEN OTHERS

The picture shown above is a reproduction of a motto queen-button that we offer to bee-keepers. It has a pin on the underside to fasten it.

Prices—by mail—1 for 6 cts.; 2 for 10 cts.; or 6 for 25 cts. Address,

GEORGE W. YORK & CO.

146 West Superior Street, - CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

! For Sale !

10 to 50 pr. ct. Discount

All Hives and Appurtenances of every description.

Large amount still in the flat. New Hives set up, painted, but never used.

About 125 Hives used and unused.

Would make best terms to party buying all the property.

Call Saturdays P. M., or Sundays; or address,

P. W. DUNNE,

165 South Forest Ave.,
3A3t RIVER FOREST, Cook Co., Ill.

Italian Bees, Queens and Nuclei

Choice Home-Bred Imported Stock. All Queens reared in Full Colonies.

Prices for May

1 Untested Queen	$0.90
1 Tested "	1.10
1 Select Tested	1.40
1 Breeder Queen	2.20
1-Comb Nucleus (no queen)	.95

Safe arrival guaranteed.

For price on larger quantities, and description of each grade of Queens—send for Catalog. Send for sample Comb Foundation. 4Atf

J. L. STRONG,

204 E. Logan St., CLARINDA, IOWA.

New England Bee-keepers!

New Stock at Factory Prices

—:PROMPT DELIVERY:—

Cull & Williams Co.

Providence, - Rhode Island.

Please mention Am. Bee Journal when writing.

Italian Queens

75c; Tested, $1.00; Breeder Queens, $5.00; 2-frame nuclei, with Queen, $2.50 each. 5A1

E. M. Collyer, 75 Broadway **Ossining, N. Y.**

Please mention Am. Bee Journal when writing.

ROOT'S GOODS

for 1910 are better than ever. We carry full line of them.

MR. BEEMAN, take notice! For low freight and quick service our location cannot be excelled in the State. Don't delay. Order now. You can be saving your honey crop while the tardy fellow is waiting for his goods to arrive.

Our 1910 Bee-Line

is of the best. We are making a specialty of high-grade untested queens from a famous strain of honey-gatherers, at $1.00 each. Order now, and be sure to get one for our delivery after May 15, 1910. Remember that cheap queens and poor blood do not pay.

Rea Bee & Honey Co.,
Reynoldsville, Pa.

Please mention Am. Bee Journal when writing.

Golden Italian Red Clover Queens
Gray Carniolan Queens

BRED FROM IMPORTED STOCK

	1	6	12
Untested	$1.00	$ 5.00	$ 9.00
Selected	1.25	6.50	12.00
Tested	1.50	8.00	15.00
Selected	2.00	11.00	18.00

Prices after June 15th

	1	6	12
Untested	$0.75	$4.00	$ 7.50
Selected	1.00	5.00	9.00
Tested	1.25	6.00	12.00
Selected	1.50	8.00	15.00

Choice Breeders, $3.00 up to $5.00.

Choice Italian Queens mated in my Carniolan apiary—First cross, one for 60c; 12 for $6.50; 25 or more, 50c each.

First Cross.—We have tested these bees and find them to be real hustlers. We have also had many calls for this very desirable bee. We have decided to offer them to the bee-keepers at the low prices above. Carniolans have many good points to recommend them to the bee-keepers, more especially this first cross. The drones are large and powerfully strong flyers, which gives vigor and strength to the bees. They cap the honey white, which most Italians do not. They resist diseases very much more than any other bees, and are quiet, gentle, and easily handled. 5Atf

CHAS. KOEPPEN,
1508 Main St., FREDERICKSBURG, VA.

Please mention Am. Bee Journal when writing.

Line-Bred Italians

My Circular tells why my Queens are superior to the general run of stock; it also contains hints on rearing long-lived, prolific Queens, improvement of stock, etc.

Send 10 cts. and receive sample cage of the Yellowest Bees on the market.

Queens ready for June delivery. Untested, $1.00; Select Untested, $1.25.

W. M. PARRISH,
Queen-Breeder,
Lawrence, - Kansas

Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

Please mention Am. Bee Journal when writing.

Tennessee-Bred Queens!

All from Extra-Select Mothers,
Davis' Best, and the
Best Queens Money Can Buy

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

	November 1st to July 1st			July 1 to Nov 1				
	1	6	12	1	6	12	Select Breeder -	$4.00
Untested	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Nuclei; no queen 1 fr	2.00
Select Untested	1.25	6.50	12.00	1.00	5.00	9.00	" " " 2 "	3.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00	" " " 3 "	4.00
Select Tested	2.50	13.50	25.00	2.00	10.00	18.00	Colony, " " 8 "	8.00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,
Dealer in, Importer and Breeder of
ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
Ewell Station on L. & N. R. R.

SPRING HILL, TENN.

Please mention Am. Bee Journal when writing.

HONEY AND BEESWAX

When consigning, buying, or selling, consult

R. A. BURNETT & CO.
199 South Water St. Chicago, Ill

Please mention Am. Bee Journal when writing.

EXTRACTING MADE EASY
by using
MILLER AUTOMATIC DECAPPERS
$5 to $35. Catalog Free.
APICULTURAL MANUFACTURING CO.,
Providence, R. I. 7Atf

Please mention Am. Bee Journal when writing.

MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies.** **We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.
S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
ARIZONA—H. W. Ryder, Phœnix.
MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

Root's Goods in Chicago

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated. Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

"Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.
43 N. Brighton Ave., East Orange, N. J.

This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only $1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

Lang, Calif., Sept. 26, 1909.

Gentlemen:—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of of expense. The cost of gasoline and oil used being only 16¢ per ton of honey extracted. It takes the place of a man at $40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here. Truly,
H. A. Slayton.

Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

Our Location and How to Reach It

The A. I. Root Co. 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

Elkhart Buggies

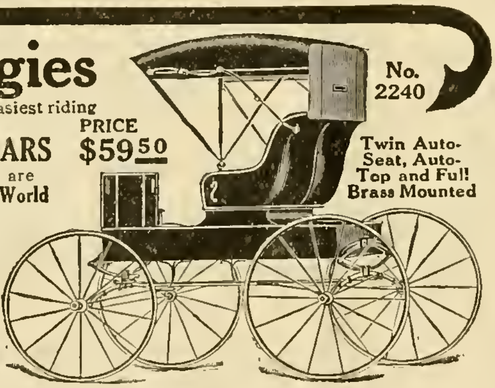
are the best made, best grade and easiest riding buggies on earth for the money.

FOR THIRTY-SEVEN YEARS we have been selling direct and are **The Largest Manufacturers in the World** selling to the consumer exclusively.

We ship for examination and approval, guaranteeing safe delivery, and also to save you money. If you are not satisfied as to style, quality and price you are nothing out.

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.
Elkhart, - - - - Indiana


PRICE $59.50
No. 2240
Twin Auto-Seat, Auto-Top and Full Brass Mounted

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

WASHINGTON QUEENS!

Wurth's Best Queens are as good as money can buy.

I have leased all of Sires Bros. Co.'s bees, with the exception of 100 colonies. I have control of seven hundred colonies of bees, and have the largest and best queen - rearing outfit in the State, with 40 years' practical experience.

Bee - keepers from any part of world need not hesitate in sending me their orders, as they will get the best queens that can be reared under the latest and best improved methods.—Safe delivery and satisfaction guaranteed.

Prices of Either Golden or 3-Banded Queens.

Untested, $1 each; six for $5; 1 doz. for $9.75.
Tested, $1.50 each; three for $4.25; six for $8.25; 1 doz. for $15.
Select Tested, $2 each; three for $6.75; six for $10.

Queens ready to send by return mail. Send all orders to—

DANIEL WURTH,
4Atf Rt. 1, WAPATO, WASH.

Please mention Bee Journal when answering this advertisement.

Golden and Red-Clover Queens...

From Extra-Selected Mothers

Untested, 75c; six for $4.00.
Selected Untested, $1.00; six for $5.00.
Tested, $1.50.

Safe arrival guaranteed. Twenty-one years' experience. Send your orders to

E. A. Simmons, Greenville, Ala.

Please mention Am. Bee Journal when writing.

CAPON TOOLS

CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

Your Order Will Be Shipped

BY AIRSHIP

IN 1915

Meanwhile half a hundred freight and express trains are daily at your service.

FREE CATALOG for the asking, telling all about—
"PEIRCE SERVICE
—ROOT QUALITY."

EDMUND W. PEIRCE,
136 W. Main St., Zanesville, Ohio

State that you saw this in Am. Bee Journal.

PRIZE TAKERS

Pharr's Goldens took first prize at 3 exhibits in Texas in 1907. We will furnish Golden, Carniolan, Caucasian, and 3-band Italian Queens, untested, $1.00 till June 1, then 75 cents. Tested, $1.50 till June 1, then $1.00. For large quantities, write. Our 3-band Breeders from W. O. Victor and Grant Anderson strains; other races from the best obtainable. "Prompt service and satisfaction," is our motto. Address, 5Atf

NEW CENTURY QUEEN-REARING CO.
or JOHN W. PHARR,
Berclair, - - Texas

Again to the Front with
The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to furnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens, each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

NORWOOD'S—Texas-Bred—QUEENS

Three-banded Queen-Bees bred for business. Try them, then you'll know. Untested, $1.00; six, $5.00. Write us.
5Atf **E. B. NORWOOD, Del Valle, Tex.**

"If goods are wanted quick, send to Pouder"
ESTABLISHED 1889.

BEE-SUPPLIES

Standard Hives with latest improvements; Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, Veils, and a complete stock of

Root's Standard Goods at Factory Prices

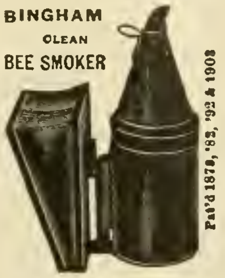
My equipment, my stock of goods, and my shipping facilities, cannot be excelled, and I ship goods to every State in the Union. Illustrated and descriptive catalog mailed free.

Finest White Clover Honey
on hand at all times. **I Buy Beeswax.**

Walter S. Pouder, Indianapolis, Ind. 859 Massachusetts Ave.

Please mention Am. Bee Journal when writing.

HAND-MADE SMOKERS



Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

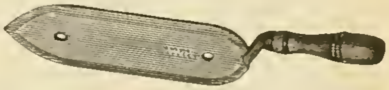
All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made.........	$1.50—4	inch stove
Doctor—cheapest made to use	1.10—3½	"
Conqueror—right for most apiaries	1.00—3	"
Large—lasts longer than any other...........	.90—2½	"
Little Wonder—as its name implies	.65—2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.



Patented, May 20, 1879. **BEST ON EARTH.**

Please mention Am. Bee Journal when writing.

DOOLITTLE'S
"Scientific Queen-Rearing"

This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., Chicago, Ill.

LEWIS BEEWARE — Shipped Promptly

SEND FOR NEW CATALOG

Extracted Honey for Sale. (Ask for Prices.)
Beeswax Wanted. 28c Cash—31c Trade.

ARND HONEY & BEE-SUPPLY CO. NOT INC.
(Successors to the York Honey & Bee-Supply Co.) **H. M. ARND, Proprietor.**
148 West Superior St., CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

Established 1885

ALWAYS ON TOP

We carry an up-to-date Line of

Bee-Keepers' Supplies

Prices the lowest in the West. Write us for our 50-page catalog, ready to mail you. Free for the asking. We can fill your orders promptly and satisfactorily. Our old customers know what we handle; to new ones we can say that we have

The Best Make of Supplies

hence there is nothing to fear as to quality.
Send us your rush orders and get your goods before swarming time arrives.
Bees and Queens in their season.
Beeswax taken in exchange for supplies or cash.

John Nebel & Son Supply Co.
High Hill, Montg. Co., Mo.

ITALIAN QUEENS DIRECT FROM ITALY
—Extensive Apiaries—
E. PENNA, BOLOGNA, ITALY.

I send Queens from May 15 to Sept. 30. In Italy we have only Italian bees, so all my Queens are warranted quite pure and rightly mated. One fertile Queen, $1.40; twelve, $12.00; one Breeding Queen, $3.00. Cash with orders. Queens sent postpaid. Safe arrival guaranteed. 5A1

Of Interest

FOR the past 50 years New England bee-keeepers have purchased Bees, Queens, Bee-hives, Supers, Section-boxes, Comb Foundation, Smokers, Honey-jars, and other necessary bee-supplies, of the Reliable and long-established firm of W. W. Cary & Son.

I have recently purchased the above business, and will continue it at the same place as before. I have been associated with the firm for the past eight years, and have had experience in all branches of the business.

I have a fresh supply of the A. I. Root Co.'s goods, which I am able to supply you upon short notice. Send in your orders early and I will give them my best attention. 4A6t

Send for Bee-Supply Catalog.

EARL M. NICHOLS,
(Successor to W. W. Cary & Son)
Lyonsville, Massachusetts

The copies of "Honey as a Heath Food" that I have used have about doubled my sale of honey. GEO. H. COULSON.
Cherokee, Okla., Oct. 26, 1909.

Write Us To-Day

for our 1910 Catalog and let us tell you all about

DITTMER'S
COMB FOUNDATION
and
WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line** of **Supplies.** It will pay you, and costs nothing.

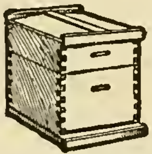
RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

BARNES' Foot-Power Machinery

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter. 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. & JOHN BARNES,**
995 Ruby St., Rockford, Ill.



Latest Improved Hives & Supplies. Disc'nt on early orders. Catalog free. Send 25 cts. for 90-page Bee-Book for beginners.
J. W. ROUSE,
3Atf MEXICO, MO.

"Established in 1878"

The Oldest, the Largest and Best Equipped Queen-Breeding Apiaries in the North.
Every Queen Guaranteed Pure Mated.
Italian and Caucasian. Circular Free.
A. D. D. WOOD, Box 61, Lansing, Mich.

Please mention Am. Bee Journal when writing.

CRANE CELLULAR CASES

Mr. H. W. Coley, of Westport, Conn., writes us:

"I am using your Corrugated Paper Cases for shipping comb honey in, this year, and like them. On one shipment last year of six wooden cases packed in a carrier with a straw cushion, the greater part were ruined. This year the same quantity shipped to the same place in your cases went through without a broken comb."

1. The first cost of the Paper Cases is less.
2. He saved the cost of the carriers.
3. He saved the time of making the carriers.
4. He saved the weight of the carriers.
5. The Paper Cases weigh less than wooden ones.
6. They can be assembled in one-half the time it requires to set up a wooden case.

Send for our Circulars and let us tell you what some of the other large producers and dealers say.

Do not take our word for the value of this new Case.

Plan to order early. Some were disappointed last year.

J. E. Crane & Son, Middlebury, Vt.

Honey and Beeswax

Chicago, April 30.—The market on honey of all kinds is slow at this writing. Very little comb offered, with prices ruling at 18c for A No. 1 to fancy, and from 1 to 3c less on the lower grades. Beeswax is in good demand at 32c. R. A. Burnett & Co.

Cincinnati, April 30.—The market on comb honey is bare. Extracted honey is in good demand. White sage, in 60-pound cans, 8½c; amber, in barrels, 6½@6¾c. Beeswax in fair demand at $33 per 100 pounds. These are our selling prices, not what we are paying. C. H. W. Weber & Co.

Indianapolis, April 30.—There is a good demand for best grades of honey, but none is now being offered by producers. Dealers are fairly well supplied with one grade of comb, which is fancy white, mostly from Michigan, and 18c is the price asked. Finest white clover extracted is being sold by dealers in cases of two 60-pound cans at 10c per pound. Producers of beeswax are receiving 29c cash, or 31c in exchange for goods. Walter S. Pouder.

New York, April 30.—There is practically no business in comb honey. Stocks are pretty well exhausted. There is little demand for fancy stock around 14@15c. Extracted is in fair demand only. Last year's crop is pretty well cleaned up, and the markets in general are not overstocked, only carrying a fair supply. Latest reports from the Coast indicate a short crop the coming season on account of lack of rain, and with a short crop in view, prices are likely to rule higher within the near future, and present stock is held firm. Beeswax steady at 30@31c. Hildreth & Segelken.

Boston, May 2.—Fancy white comb honey at 16@17c; No. 1, 15@16c. White, extracted, 8@9c; light amber, 7@8c; amber, 6@7c. Beeswax, 30@32c. Blake, Lee Co.

Kansas City, Mo., April 30.—Our market is absolutely bare of comb honey, consequently we have no quotations to make. The demand for extracted is fair; supply light. We quote: White extracted, per lb., 6¾@7c. Beeswax, 25@28c. C. C. Clemons Produce Co.

Zanesville, Ohio, May 2.—There is about a normal demand for honey, with market rather bare. At this season of the year but little is offered. Best grades of white clover comb, which is what the trade here demands, should bring first-hand 14½@15½c, with wholesale prices about as last quoted. Producers should receive for beeswax 27@28c cash, 30@32c in trade, according to quality. Edmund W. Peirce.

Only 25 cents per Case!

60-lb. Empty Tins, two to a case; used but once—as good as new.

C. H. W. Weber & Co., Cincinnati, Ohio.

HURT-CAIN CO., Inc., Receivers and Shippers of Comb and Extracted Honey. Refiners of Beeswax.

Consignments Solicited.

We make a specialty of Southern Honey.

5A3t **37 Vance Ave., Memphis, Tenn.**

Cook's Honey-Jar.

With patent Air-Tight Sanitary Stopper is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of Well-Bred Bees, Queens, Hives, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

FALCON FOUNDATION

Years of experience in the manufacture of

FALCON COMB FOUNDATION

have made it PERFECT.

Bees like it, and the foremost

Honey-Producers Use It.

It helps materially to increase the

Honey Crop

(Send for our new Catalog.)

Ship us your

BEESWAX

to FALCONER, N. Y.

Will send shipping-tags, when you write asking for quotations.

We pay highest market prices.

W. T. FALCONER MFG. CO.

JAMESTOWN, N. Y.

SUPERIOR BEE-SUPPLIES

Specially made for Western bee-keepers by G. B. Lewis Co. Sold by

Colorado Honey-Producers' Association,

Denver, Colo.

As Usual—

Franklin, Tenn., Feb. 19, 1910.

Mr. C. H. W. Weber,
Cincinnati, Ohio.

Dear Sir:—Your consignment has arrived all O. K., and I find everything I ordered. I wish to extend many, many thanks for your promptness and fair dealing. All future orders will be sent to you.

Very truly yours, W. A. Moore.

I want you to notice Four Things in the above Letter:

I.—The goods reached Mr. Moore O. K. We know how to pack carefully and securely, and without any useless weight.

II.—He found everything ordered. We carry large stocks always on hand, and our system of checking prevents annoying mistakes.

III.---The advantages we have for prompt delivery are unsurpassed. If you want goods quick, send to Weber.

IV.---Fair dealing is now and always has been our motto.

CATALOGS have been mailed to nearly all our customers. If you have not received yours, send us a line and we will get one to you by return mail.

Yours for service,

2146 Central Ave., Cincinnati, Ohio. C. H. W. WEBER & CO.

BEE-KEEPERS OF THE NORTH

BEE-KEEPERS OF THE WEST

Be Sure to get our PRICES on

BEESWAX

Before selling your season's Wax
or
Let us send to you our prices for
Working your Wax into

DADANT'S FOUNDATION

Many large Honey-Producers prefer our Foundation to other makes, because the bees like it best.

We can use almost an unlimited quantity of BEESWAX, and we are buying at all times of the year **at highest cash and trade prices.**

During the season of 1909 we handled over 175,000 pounds of Beeswax.

BEE-SUPPLIES
OF ALL KINDS.

We Keep Only the Best.

Let us Figure on
Your Season's Supplies

1910 CATALOG
Now Ready,
and Free for the Asking.

DADANT & SONS, Hamilton, Illinois.

BEE-KEEPERS OF THE EAST

BEE-KEEPERS OF THE SOUTH

Established 1864

Bee-Keepers' Supplies

We manufacture and furnish everything needed in practical, up-to-date BEE-Culture at the very lowest prices. We make the celebrated **DOVETAILED HIVES** and the famous **MASSIE HIVES.** These are the most practical, up-to-date Bee Hives made and our extremely low prices place them within the reach of all bee-keepers. Our HONEY EXTRACTORS and BEE SMOKERS are the very best that can be had anywhere. *We guarantee satisfaction to every customer* or refund your money and pay the transportation charges both ways. This means that you can send back to us any goods you buy from us that are not satisfactory. We will exchange them or refund your money instantly without a question.

If you haven't one of our **CHAMPION SMOKERS** you don't know what a good one is until you get one, (sample by mail $1.00).

Write today for our large illustrated catalog—it is free; it is one of the easiest catalogs to order from that you ever saw. *Remember our guarantee of entire satisfaction.*

Write us for prices on any orders. *We can save you money.*

Kretchmer Mfg. Co., Council Bluffs, Iowa

AMERICAN BEE JOURNAL

50TH YEAR

No 3

Agricultural College

JUNE-1910

Mass Agl College apr15
Library Amherst, Mass

THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY

146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada, $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec10" on your label shows that it is paid to the end of December, 1910.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your address-label, which shows that the money has been received and credited.

Advertising Rate, Per Agate Line, 15c.

14 lines make one inch.
Nothing less than 4 lines accepted.

DISCOUNTS:

3 times 14c a line 9 times 11c a line
6 " 12c " 12 " (1 yr.) 10c a line

Reading Notices, 25 cents, count line.

Goes to press the 6th of each month.

Our Famous Red Clover and Golden Queens

Have no equal. Untested, 50 cts. Select untested, 75c. Tested, $1.00. 6A3t

Evansville Bee & Honey Co.,
2430 South Gov. St., - EVANSVILLE, IND.
(Successor to H. A. Ross.)

Queens Three - Banded Leath'r-Colored Italian QUEENS. Selected Untested, $1.00 each; 6 for $4.50. Also—FULL COLONIES and NUCLEI For Sale. Circular Free.

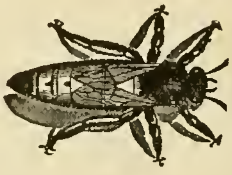
3A8 **O. F. Fuller, Blackstone, Mass.**

REF.—Arthur C. Miller, Providence, R. I.
Please mention Am. Bee Journal when writing.

Untested Italian Queen-Bees

Our Standard-Bred

6 Queens for $4.00; 3 for $2.10; 1 for 75 cents.



For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

> GEORGE W. YORK & CO.:—The two queens received of you some time ago are fine They are good breeders, and the workers are showing up fine I introduced them among black bees, and the bees are nearly yellow now, and are doing good work.
> Nemaha Co, Kan, July 15. A. W. SWAN.

> GEORGE W. YORK & CO.:—After importing queens for 15 years you have sent me the best She keeps 9 1-2 Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week.
> Ontario, Canada July 22. CHAS. MITCHELL

> GEORGE W. YORK & CO.:—The queen I bought of you has proven a good one, and has given me some of the best colonies.
> Washington Co., Va., July 22. N. P. OGLESBY.

> GEORGE W YORK & CO.:—The queen I received of you a few days ago came through O. K, and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. McCOLM.
> Marion Co., Ill., July 13.

We usually begin mailing Queens in May, and continue thereafter on the plan of "first come first served." The price of one of our Untested Queens alone is 75 cents, or with the old American Bee Journal for one year—both for $1.40. Three Queens (without Journal) would be $2.10, or 6 for $4.00. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage. You cannot do better than to get one or more of our fine Standard-Bred Queens.

George W. York & Co., 146 W. Superior St. Chicago, Ill.

Please mention Am. Bee Journal when writing.

Mott's Strain of Italians!

Will work red clover. 90c Untested; $1.25 Tested. **Five-Banded Golden,** the same.—Natural Golden from Imported stock, extra. Ask for List. Reduced rates in July.

NUCLEI. Leaflets—"How to Introduce Queens," 15c; "How to Increase," 15c—both, 25 cents. 4Atf

E. E. MOTT, Glenwood, Mich.

Please mention Am. Bee Journal when writing.

BEE-KEEPERS

Write us now for our Catalog and get low prices on good, honest,

BEE-KEEPERS' SUPPLIES

Our specialty is making Sections. All other goods up-to-date.

AUG. LOTZ & SON, Cadott, Wis.

Please mention Am. Bee Journal when writing.

NOBODY GETS STUNG
WHEN HE IS WISE ENOUGH TO USE THE DANDY
MUTH IDEAL BEE VEIL

3 HONEST OPINIONS
"IT'S THE BEST ON THE MARKET"—DR. D. EVERETT LYON, ALLENDALE, N J.
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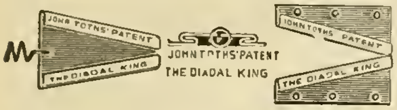

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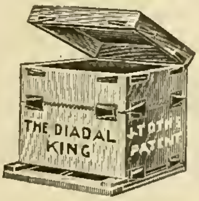

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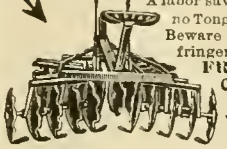

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CHICAGO, ILL., JUNE, 1910

Vol. L---No. 6

Editorial Notes and Comments

"Nosema Apis"—Is It a New Bee-Foe?

Under the title, "Nosema Apis—A New Bee-Foe," in the November, 1909, issue, page 358, there appeared an editorial giving a brief resume of a report in the Praktischer Wegweiser, of the work of Dr. Enoch Zander on *Nosema apis*, a member of the animal kingdom which he finds in adult bees suffering from dysentery. He considers the organism as the cause of the diseased condition, and considers the disease infectious and a serious manace. The published accounts of this work have seemingly led many of our bee-keepers to be alarmed for the future of the industry, and to fear that this disease may be introduced into America. There is no cause for fear in the matter.

The disease with which Dr. Zander has evidently worked is our old friend and enemy Dysentery. He does not claim that this is a new disease, but rather that he has found the cause of the old one. We should be glad that the cause of a well-known disease is being investigated, rather than alarmed because a new name has appeared on the bee-keeping horizon.

Dysentery is a well known and readily prevented disease, which causes no great inconvenience to progressive bee-keepers. It is brought on by poor winter stores and long confinement in the hive. Honey-dew is a very common source of this trouble, and during the past winter, when it was so abundantly used for winter stores, dysentery caused heavy losses. The progressive bee-keeper, however, got the honey-dew away from the bees before cold weather set in, wintered on sugar syrup or good honey, and no dysentery appeared. A disease which we can predict, prevent and produce if we should so wish, is not likely to frighten progressive bee-keepers very much.

In the meantime, let us patiently wait until full knowledge of the new organism is obtained. We need not worry about the introduction of dysentery into America, for it is already here. Now that Dr. Zander has found *Nosema apis* in the intestines of diseased bees, dysentery does not thereby lose or gain any undesirable characters.

When to Put On Supers

To put supers over a colony much before they are needed is simply a waste of heat, and so, indirectly, a loss in the harvest. To leave them off till they are needed helps to bring on swarming, and this again interferes with the harvest. It is better, however, to put them on a week before they are needed than a day after.

The old rule was to give supers as soon as bits of white wax are seen on the upper part of the comb or on the top-bar. This is all right where swarming is desired, but otherwise rather late, for this extra wax is a sign of some crowding, and that induces swarming. It is better to have the supers on at least a few days before there is any danger of crowding. A little before the real honey-flow begins is all right. For example, in the North, where white clover grows, watch for the very first clover blossom that opens, and then, or within a week, give supers. The real flow from clover does not begin until about 10 days after a stray blossom opens here and there.

Honey vs. Sugar for Feeding

Is sugar as good for feeding bees as honey? That depends. Sometimes it is not so good: sometimes better. Let it be well understood that sugar and honey are not precisely the same. There are elements in honey that are not in sugar. Authorities tell us that young bees reared on sugar will be lacking in vitality, and those bee-keepers who empty all honey from the brood-chamber replacing it with sugar may unwittingly be losing heavily thereby when they think they are gaining the difference between 20 or more pounds of honey and the same weight of sugar syrup.

On the face of it, it may look to some a very simple problem. Extract from the brood-combs 20 pounds of honey, sell it for 10 cents a pound, and you have $2.00. Then feed back 20 pounds of sugar syrup at a cost of 70 cents, and you have $1.30 for your trouble. But suppose the vitality of your bees the following spring be so much lessened that the colony shall store 13 pounds less of honey. You are then nothing ahead, and have no pay for your labor. Also, there is some danger that enfeebled vitality may become a permanent factor.

Sometimes, however, the brood-chamber is filled with honey-dew of such character that it means sure death to the colony before spring. In that case it is certainly better to extract and feed sugar.

Latterly, however, we are told that bees winter all right on part honey-dew. Perhaps if the matter be looked into closely, it may be found that it is even better to have part honey-dew than to have all sugar. For the sugar being fed last will be consumed first. Sugar is all right to keep up the heat of the colony when it is needed for that alone. If the sugar holds out till the bees fly daily, then they may take freely of the honey-dew without harm, and find it better than sugar for brood-rearing.

The important point is that plans should now be made to have on hand next spring plenty of good sealed honey for brood-rearing, so as not to have to depend upon sugar.

Double Shaking for Increase

Under the captivating title, "Making 100 percent increase, yet getting a full crop of honey," is given in the Bee-Keepers' Review, Leonard S. Griggs' plan of honey-getting and swarm-prevention. As soon as any colony is found to have larvæ in queen-cells preparatory to swarming, the hive is taken from its stand and in its place is put a hive containing frames filled with sheets of foundation, all but one frame which contains drawn comb that must have had brood reared in it at least one season. This comb is placed in the middle. The supers from the old hive are placed on the new. Then in front of the new hive the bees are shaken quite clean from all the combs in the old hive except two, the queen preferably being shaken among the last bees entering, so that she may not rush up into the super. Then the old hive with its frames of brood is placed behind and a little to one side of the new one. About a week later the shaking is repeated, the bees from the old hive being again shaken into the new, and from all the combs but two. Then the old hive is placed on a new stand and a young queen is given to it.

Anwering the question, "Does the shaken swarm prepare to swarm again after receiving the additional shake of the week later?" Mr. Griggs says: "I would say about 5 percent have started queen-cells again; some about a week after the second shake and others toward the close of the swarming season."

By this method there is 100 percent increase, and Mr. Griggs thinks he gets as much honey as from a non-swarming colony. As to this last, not every one will agree with him, although the difference may not be so very great.

Why Bees Don't Work in Supers

The inexperienced bee-keeper is expected to ask as to this matter apparently with the notion that at a certain time all colonies, no matter what the circumstances or conditions, will begin to pour honey into the supers.

One reason may be that the colony is so weak that it has all it can do to keep up the supply for the brood-chamber, without troubling the supers.

Again, the brood-chamber may not be filled, and so long as there is any room there it is preferred to room in the supers.

If sections are in the super, the bees may be hesitating about commencing on the raw foundation, but will promptly begin if a bait-section is present; that is, a section drawn out, or partly drawn out, the previous year.

Again, the bees may be storing nothing in supers because they have nothing to store. Even though the bloom be abundant, there may be no nectar in it.

Foul Brood—American and European

There seems to be a constant tendency toward confusion as to the two kinds of foul brood, and those who say it would have been better to have retained the old nomenclature have some ground for saying so. There would be less danger of confusion, and it is certainly shorter to say foul brood and black brood than to say American foul brood and European foul brood. As the McEvoy treatment is successful with either disease, no harm will come from wrong naming if that treatment be applied. But when it comes to the Alexander treatment, the case is entirely different.

Whatever may be thought of the Alexander treatment, it should be distinctly kept in mind that it applies only to the treatment of European foul brood. Mr. Alexander insisted most strenuously that it was utterly without effect upon American foul brood. So a confusion in names may lead to serious results. A case in point occurs in the interesting report for 1909, issued to its members by the Illinois State Bee-Keepers' Association. In the report of the Chicago-Northwestern convention, page 132, is given in condensed form the Alexander treatment for *American* foul brood. An inexperienced bee-keeper might easily accept that as correct, and be bitterly disappointed in the result. Of course, European foul brood (black brood) was meant.

It may be worth while to give here a corrected copy of the condensed statement of the two forms of treatment given in the report:

MODIFIED ALEXANDER TREATMENT FOR EUROPEAN FOUL BROOD.

Make the colony *very strong.*

Remove the queen.

Ten days later destroy queen-cells and give a virgin of best stock.

MODIFIED McEVOY TREATMENT FOR EUROPEAN FOUL BROOD.

Brush and remove all frames of brood but one.

Put beside that one two *empty* frames.

When eggs are found in one of the empty frames, remove the foul-brood comb and fill up with foundation.

Some days after the foregoing was written, we received the following on the subject mentioned in the above item, first paragraph:

DEAR MR. EDITOR:—Both Mr. Doolittle and Mr. Byer have complained of the terms "American Foul Brood" and "European Foul Brood," and yet they both keep on using them, whereas neither term has been accepted by the bee-keeping world, *nor likely to be.* The objections are these:

1. You cannot change a common name, such as "foul" brood or "black" brood, once established, *even if desirable.*
2. No change is necessary, or desirable.
3. The rule of priority holds good.
4. There are over 100 bee-papers in existence, and only two or three have attempted to make the change. There is not the slightest probability of the others making any such quixotic attempt; therefore, in the interest of science and of bee-keeping, it would be well for writers to drop the attempt and return to the *status quo ante.*

San Diego, Cal. W. K. MORRISON.

It certainly would be a good thing if all the bee-papers, at least those in the English language, would agree in the nomenclature referred to. "Foul brood" and "black brood" are very much simpler, just as clear, and have, besides, the advantage of several years' use.

Disinfecting Foul-Broody Hives

Another American fallacy has been exploded—namely, that respecting the uselessness of the disinfection of hives. The Swiss inspectors have also carried out experiments, and they have proved just the contrary. An instance is given of an apiary of 20 colonies, the bees of which had died out in the Bernese Oberland. The proprietor sold the hives to several bee-keepers in the neighborhood, and in every case where they were used the disease broke out.—*British Bee Journal.*

American bee-keepers are by no means a unit in believing it is unnecessary to disinfect a hive in which foul brood has dwelt. Some of them insist just as strongly upon disinfection as if they had spent their whole lives on British soil. The man, however, who thinks disinfection unnecessary will hardly be satisfied with the mere statement that Swiss inspectors "have proved" disinfection necessary. He will say, "You've got to show me," and will ask *how* it was proved. As to the instance given, he will say, "I grant you that there may have been 20 cases of foul brood in hives that had previously contained foul brood. And I can point you to 20 cases in new hives that by no possibility could have previously contained foul brood. Where is your proof that the hive had anything to do with it in either case?"

Perhaps it does not make so much difference but that each may go his own way. The one will say, "Thousands of infected hives have been safely used; so it is certain that disinfection is not always necessary, and the cases of carrying the disease are so few that it is cheaper to treat again the few cases that occur than to be to the trouble of disinfecting all hives." The other will say, "It is not much trouble to disinfect a hive, and I believe it is best to be on the safe side."

Ohio Foul-Brood Law

Ohio bee-keepers are rejoicing because their foul-brood law has passed both houses of the legislature, but are still on tenter-hooks lest the governor veto it. There seem to be good grounds for their fears, from the fact that lately the governor of New Jersey vetoed a similar bill after it had passed the legislature, and some time ago the governor of Missouri did the same thing. It would be a good thing to have prepared a special course of instruction for governors, that they might be coached in advance.

Foul Brood Law in New Zealand

Bee-keepers in New Zealand are feeling quite encouraged with the workings of their new foul-brood law. Keepers of bees in box-hives at first thought it a hardship and an interference with their rights to be obliged to put all their bees into movable-frame hives, and some of them thought there was no need to submit to such a law. But Mr. W. B. Bray, the energetic inspector, had two of them fined for failure to transfer their colonies into hives with movable frames after having written notice served upon them, and this has caused a change of mind. Very likely the box-hive men will all come to look upon the law as a blessing in disguise.

Reserve Combs of Honey for Feeding

Not many pieces of advice can be given of more value than the advice to have on hand some extra combs sealed full of honey, ready to be given in the spring or early summer wherever needed. Not only does the beginner need the advice—there are no doubt those who have been keeping bees for years that do not fully realize its importance.

It takes a long time to learn with what rapidity stores are used in the early part of the season, when colonies are building up, with combs filled with brood that require a big lot of feeding, when perhaps little or nothing is being brought in from outside. If stores run short, there is a let-up in brood-rearing, and it may even go so far that the white skins of larvæ may be found thrown out at the entrance, their juices having been sucked out by the bees. The result upon the honey crop is the same as if right in the midst of the flow a large number of bees were poisoned.

In white-clover regions there may come a period of starvation even after clover is in bloom, either because of inclement weather or because the bloom yields no nectar.

To meet the case there is nothing so good as a frame of honey entirely filled and entirely sealed. It is too late now to advise those who may be short at the beginning of this season, but it is perhaps the best time now to urge readiness for the spring of 1911. If you have 8-frame hives, you will do well to lay your plans to have at least 2 extra combs of honey for each colony. Larger hives are likely to have a larger supply, with less danger of running short.

Just what is the best way to secure these extra frames of honey is a question for each one to decide for himself; the present desire is simply to urge that the matter be not overlooked, but planned for in advance—planned for now. For some it may be best to have a colony or colonies—according to the number of colonies to be provided for—entirely devoted to filling up these extra combs. A colony that spends the entire season filling such combs will need very little care. Just before there is any danger of swarming, put all the brood but one in an upper story, leaving in the lower story the queen and one of the poorest frames of brood, with a queen-excluder between the two stories. The vacancies in each story will of course be filled out with drawn combs or frames filled with foundation. This is the Demaree plan, and with many it acts as an entire preventive against swarming. As the brood hatches out in the upper story the vacant cells will be filled with honey. But before there is any danger that the surplus room shall be filled an additional story must always be given. To make still more sure against swarming, allow ventilation between each two stories by shoving forward or back the upper story, so as to leave an open space of ¼ of an inch.

Some who count on a late flow of fall honey may secure filled frames at that time. Others may be able throughout the season to secure a frame here and there. Perhaps a nucleus may have a comb too much crowded with honey. These frames from different places may be assembled over a colony whose business it shall be to complete the job by filling the combs plump full.

Whatever plan may be adopted, plan now to have a stock of extra combs of honey for next spring.

Painting Hives

In the British Bee Journal is the following paragraphs written by D. M. Macdonald:

> Congratulations to the American Bee Journal on attaining its "Golden Jubilee Year!"
>
> The associate editor (page 6) does not paint his hives! I would have all hives painted, for one or all of the following, amongst other, reasons:
>
> 1. They look ever so much better painted. The senior editor is a man of æsthetic taste, and adorns the front cover of each issue of the American Bee Journal.
>
> 2. Painting preserves the wood.
>
> 3. In this way the existence of the hive is doubled or quadrupled.
>
> 4. Suitable painting keeps the interior of the hive *warmer* in winter.
>
> 5. It keeps it *cooler* in summer.
>
> 6. It hinders cracks and faults in the wood from developing.
>
> For these reasons driving rain and melting snow are repelled from the wood, or at least it does not absorb the moisture readily. *Therefore*, Doctor, the moisture from outside does not penetrate to the interior. You are a prohibitionist, I am a temperance advocate. We both aim at keeping moisture (drink) outside! Inside it works evil, outside it can do no harm So with moisture in the hive. But, you will say, moisture is generated in the hive. Yes; that is so. But we never should think of letting it find its way out through the wood. That process would be slow, tedious, uncertain, and at best but partial. Our *absorbent* packing, while it conserves the internal heat, allows a mild, gentle "percolation" upward, and this is still further aided by the span-roof, all but universal in this country, affording an open space above the packing, and by the ventilating holes back and front allowing of the quick evaporation of the moisture.

Thanks, Mr. Macdonald, for my little share in the congratulations.

After giving some study to your 6 points, I incline to advise you—in case you should want my advice—to paint your hives. But some things appeal to you that do not appeal with the same force to me, as you will see by taking up your points seriatim.

1. I entirely agree with you as to the matter of looks, and as to the taste of the senior editor. If as many people looked upon my hives as look upon that well adorned first cover, you may be sure they would be painted, if not polished. But my hives are rarely seen by any one except those at work at them (I've no doubt it's different with you), and while at work I see only the inside, and when through work I can have more æsthetic enjoyment in 5 minutes looking at the roses and natural scenery than in looking at painted hives all day.

2. I agree; it preserves the wood, but not the bees in winter. And painting costs, too.

3. Whether it doubles the existence or not, don't you think you are doubling the argument in No. 2?

4. Yes, and moisture.

5. Sometimes not. Evaporation is a cooling process, and more moisture evaporates through the unpainted than through the painted wall.

6. In this case *you* are the prohibitionist, for you want to prohibit entirely the moisture from penetrating from the outside. And it is all right for you, for your absorbents (if a thoroughfare may be called an absorbent) provide escape for moisture. But I have no absorbents. "Get them?" No, thank you, unpainted walls are cheaper and less trouble.

Now I admit the force of your arguments as applied to your own case (really No. 1 is argument enough of itself), so you have my cordial permission to wield the brush to your heart's content; and if you could find it in your heart to write out a permit for me to use my hives without paint, I would appreciate the favor. C. C. M.

Miscellaneous News-Items

The National at Albany, N. Y.

It has been definitely decided by the Executive Committee, that the 1910 meeting of the National Bee-Keepers' Association will be held at Albany, N. Y. The exect date has not yet been fixed, but probably about the middle of October would suit most of those who would go. We hope to be able to announce the date next month.

◆

Nebraska Fair Premium List

We have received the premium list of the Nebraska State Fair for 1910, to be held at Lincoln, Sept. 5 to 9. The premiums offered on exhibits of bees, honey, etc., amount to over $200 in cash and about $100 in miscellaneous articles. They surely ought to bring out a large display. Mr. E. Whitcomb, of Friend, Nebr., is the Superintendent, who in past years has made the Apicultural Department of the Nebraska Fair such a great success. Nebraska bee-keepers should unite in making the exhibit at their next September Fair the largest and best ever shown. Write to Mr. Whitcomb for a copy of the premium list, if in Nebraska, and help in making a display in the bee and honey department worthy of Nebraska beedom.

Report on Maryland Bee-Keeping

We have received No. 3, Vol. VI, of the Maryland Agricultural College Bulletin, which contains the second Annual Report of the Maryland State Bee-Keepers' Association. It is an illustrated pamphlet containing 72 pages, and is very nicely gotten up. Every bee-keeper in Maryland should have a copy of this Report, which, no doubt, can be had by addressing Thos. B. Symons, College Park, Md., who is the Secretary of the Association.

◆

"The Home of 'Beeware'"

Last month we mentioned our visit to the G. B. Lewis Company at Watertown, Wis., and promised to have something more to say about it in this issue of the American Bee Journal. Their massive new plant is located only a few blocks from the old one, which was destroyed by fire in June, 1909. We want to say that there is no better indication of American thrift and enterprise than is found in this new plant of the G. B. Lewis Company, which affords a floor space of over 40,000 feet, and covers nearly 6 acres of ground. Fig. 1 shows the main factory, which is operated entirely by electricity. In addition to this are the warehouses, lumber-sheds, main office-building and lumber yard, with a piling space for 2,000,000 feet of lumber.

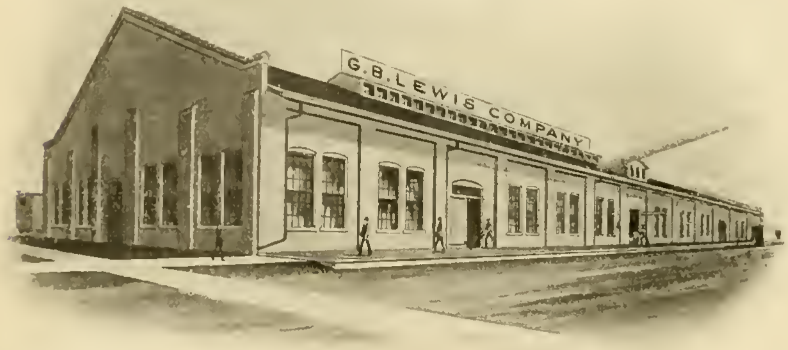


Fig. 1.—Main Operating Plant of G. B. Lewis Company, Watertown, Wis.

More wonderful is the fact that this splendid monument to untiring effort and progress has sprung up from a mass of charred ruins in but a few months. Now while the bees are working industriously in the fields, the wheels of the new Lewis plant are turning day and night to supply the demand for bee-goods, which has been coming in from all sides. To meet this demand it has been necessary to operate the plant day and night, with a working force of over 100 hands on bee-hives and parts, as well as sections, at a weekly pay-roll of over $1000. This gives a daily output of hundreds of hives and over 100,000 sections. The average consumption of lumber is over 20,000 feet per day, the planing of which alone produces several tons of shavings, which are mechanically baled and sold in the market by the carload.

This plant has one-half mile of private railroad track, so that the raw material can be hauled to its door and be taken away in the shape of the finished product without unnecessary delay and cartage.

One novel feature of this new plant is Superintendent L. W. Parks' office, shown in Fig. 2. It is suspended between the steel trusses of the operating plant, about 10 feet from the floor, and through the large windows an excellent view of all the interior parts of the factory is obtained. The superintendent is thus able to attend to his desk-work and at the same time keep in constant actual touch with all work in the factory.

I was not only told, but could really see, when visiting this plant, that Lewis Beeware has now reached such a state of perfection that it is in reality "K. D. Furniture." The parts are all accurately made of the very finest clear, white, lumber; all parts very carefully fitted, so that when they are received no operation to make them fit is necessary other than the putting together. In fact, everything required for the setting up of the hive but the hammer is sent right along with the goods. And we doubt not if the order were sufficiently large, a splendid hammer would be put in without extra charge.

The G. B. Lewis Company have been manufacturing Lewis Beeware for 35 years. Their employees have been trained in the making of the perfect article, constantly keeping watch over all the machinery, which is strictly modern and up to date, and, in fact, the very best that American skill can produce for the making of bee-supplies. In this way the out-put is kept up to the standard. Since the Lewis plant was in its infancy the best materials have always gone into the manufacture of Lewis Beeware, and during all the years of its commercial life the quality has never been sacrificed. To this is undoubtedly due the fact that Lewis Beeware is now used by the most successful bee-men in the country, many of whom produce honey by the ton. This product has a national reputation, and not only sells all over the United States, but in all parts of the Globe, and is known as the "Beeware Brand."

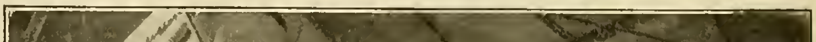


Fig. 2.—Superintendent's Office in Interior Main Operating Plant of G. B. Lewis Company—Pay Day.

It is very rare in beedom that a factory which has been burned to the ground has been rebuilt so quickly, so completely and on so large a scale as has been the case with that of the G. B. Lewis Company. In view of this we feel it is well worthy of special mention and description. We are always glad to help along a deserving institution, especially if that institution is really run in the interest of bee-keeping in general, and conducted on right principles. We know this applies to "The Home of Beeware," for we have been acquainted with the G. B. Lewis Company for over 25 years, and have yet to hear of anything unfavorable concerning them or the goods they manufacture and send out to the bee-keeping world.

◆

Indiana Bee-Inspection Work

We have received from Benjamin W. Douglass, of Indianapolis, Ind., who is the State Entomologist, his second Annual Report, covering 1908-1909. The volume consists of 248 pages, is cloth-bound, and most beautifully printed and illustrated. The bee-inspection work is written by George S. Demuth, Assistant in charge of the Division of Apiculture, and covers 40 pages. No doubt, a copy of this interesting book can be had by applying to Mr. Douglass. Every bee-keeper in Indiana ought to have a copy of it.

When forwarding to us the copy of the Report referred to above, Mr. Douglass wrote as follows:

Editor American Bee Journal.
Dear Sir:—I am sending you, under sep-

arate cover, a copy of my last Annual Report, which gives an account of the Indiana bee-inspection law, and of our first summer's experience with it. We are very much pleased with the way in which this statute is working out. The law is planned so as to cost the State the minimum amount and still do efficient work. The bee-inspectors are men competent in both bee-work and orchard work, and are accordingly employed for the entire year. When not engaged in the actual work of bee-inspection they devote their time to our regular inspection work in the orchards of the State. This renders unnecessary a separate apiary department whose inspectors would be idle a great portion of the year. As a result, I think we are securing more competent bee-inspection for less money than any other State in the Union.

The work of last season as reviewed in the Report speaks for itself.

Respectfully,
Benjamin W. Douglass,
State Entomologist.
Indianapolis, Ind., May 18.

Sections Made of Paper

We have received the following from one of our readers in Quincy, Ill.:

> All know that the price of sections is getting higher every year, and basswood is fast disappearing in some localities. It is strange that some of our bee-supply manufacturers have not as yet tried making sections out of paper. We have berry-boxes made of paper, and they are cheaper than, and just as strong as, the wooden ones. I wonder why a section could not be made with wire strung through the paper to help support it. I think they could be made just as strong as the wooden ones. I should like to know if paper sections have ever been tried.
>
> Subscriber.

We believe that a bee-keeper in Michigan experimented with heavy card-board made into sections, and he seemed to think that it was a success. Perhaps he will be kind enough to tell us something about this experiment with paper sections. It would seem, at first thought, that paper sections would be cheaper than wooden ones. Perhaps some manufacturer will be kind enough to experiment in making them, and report.

Our Front-Page Pictures

The first picture is referred to on page 198 by Mr. Adams, and the second one is described as follows:

Apiary of John Albert, Jr.

> I am sending a picture of a part of my apiary. It contains 40 colonies of Italian bees—my favorites. The strongest colonies are run for comb honey, while the weaker ones are for extracted honey.
>
> Our main honey-flows are white clover and heartsease, although heartsease is the more important. Heartsease honey sells better than the clover honey in this locality.
>
> The honey-flow last year was almost a complete failure. It was necessary to feed some of the colonies. Prospects for a good clover flow for this year are excellent.
>
> Wahoo, Nebr. John Albert, Jr.

A New Bee-Book

The Macmillan Co., of New York, N. Y., have just issued a book written by D. Everett Lyon, which bears the attractive title, "How to Keep Bees for Profit." It has 329 pages, measuring 7½x5 inches, with clear print from large type. The usual topics discussed in text-books on bee-keeping are found in this work, although necessarily with greater briefness, as it contains less than a fourth as much matter as the leading bee-books.

The work is written in easy style. Unfortunately it is sometimes more readable than reliable. In the chapter "How to Make Increase," the reader is advised that about the last of April, if the weather permits, and honey is coming in rapidly, a good, strong 10-frame colony of bees may be increased to 5 colonies by dividing into 5 parts and furnishing each part with a queen, and then the author says:

> "If you desire to increase one colony up to 10, the method of procedure is identically the same, and differs only in that you give each empty hive but one frame of bees and brood instead of two."

In the North, even supposing that each of the frames were filled with brood, a single frame of brood and bees in a hive in April would have a hard time of it to struggle through until warmer weather.

The author favors Italian bees for the beginner, especially of the red-clover strain; for comb honey, the Danzenbaker hive or other shallow hive; and says: "By all means winter outdoors."

Although this book can not take the place of any of the excellent text-books on bee-keeping already so extensively in use, it adds one more to the constantly increasng number of works on this fascinating subject. It is bound in cloth, and sells for $1.50, with 16 cents extra for postage. We club it with the American Bee Journal one year—both for $2.20. Send all orders to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Tale of a Bee

A boy met a bee in the clover,
And bothered the spry little rover,
The bee grew mad and then madder—
And the youth is now wiser and sadder.
—*Selected.*

National's Membership Growing

The last report from General Manager France showed a membership of 3837 in the National Bee-Keepers' Association. So it should soon be an even 4000. We had hoped that it might reach 5000 by the time of the next National convention, and still feel encouraged that it may. But perhaps it would be well to make it 4000 first.

Do Bees Steal Eggs?

It is hard for one to believe that bees will deliberately enter another hive and carry away eggs from which to rear a queen. But M. T. Pritchard, the man who with the aid of a boy reared nearly 3000 queens in one season, reports, in Gleanings, a number of cases that seem to leave no room for doubt. He says:

> In the early part of the season of 1906 we had trouble with our queenless colonies used for grafting. Nearly every day we found cells started with either eggs or young larvæ in them, resulting in the bees refusing to accept the grafted cell given to them. This we could not account for, as these colonies are not used to graft into until 5 or 6 days after they are made queenless. Occasionally one of these cells would be overlooked and a virgin hatch, each of which proved to be a *black* virgin.
>
> All colonies in the yard were Italians with tested Italian queens except one. This was a fine imported Carniolan queen kept in a very weak colony to prevent her from rearing any drones; consequently we concluded that the queenless bees were stealing eggs from the Carniolan colony; and to test it we saved several of these cells and hatched them, and found that each one produced a typical Carniolan virgin. We then removed the Carniolan colony from the yard, and had very little trouble with natural cells from that time.
>
> Our theory is that the Carniolan colony being light, or from some other reason, did not defend its entrance as well as the other colonies, and the queenless bees found it an easy place to steal eggs.

A Bear Correction

On page 155 there was an item in "Canadian Beedom" headed, "Not Byer's Bear." Mr. J. M. Wismer, who wrote the letter in which the error occurred, says that the original in his scrap-book reads as follows: "Somewhere in the 70's the writer had been privileged to take a night's lodging with a friend in J. L. Byer's neighborhood, who owned a large brown bear." It seems that the way we published it, the bear was owned by Mr. J. L. Byer, who conducts the "Canadian Beedom." He never was a bear conductor or owner. We are glad to make the correction, as we do not wish to bear down too hard on Mr. Beyer, for, if we remember correctly, he is already becoming a little bare on top!

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Bees Wintered Splendidly at Marengo—The Unusual Spring

Last fall we took our bees into the cellar Nov. 18. The weather was very mild until Dec. 6, the thermometer going as high as 67 degrees, and it did seem almost too bad to have them in the cellar when they could be having such good flights, but we were very glad they were *there* when on the 8th of December we had a heavy snowstorm, and never saw bare ground again until March. They wintered splendidly, and we took them out of the cellar March 21, strong and vigorous, never in better condition. We had some misgivings as to what the weather might be, but never in all our bee-keeping experience have we had ideal weather for bees to build up as was the rest of March and the first half of April. They just boomed.

We overhauled most of our bees in March. We found them fully a month ahead of any previous year. Full, healthy frames of brood never looked so good before.

Then when pears, plums, cherries, and apples were in full bloom—each tree a bower of beauty—came our freeze. The thermometer at 21 degrees and the ground covered with snow. Oh, such desolation! It made one shiver to look at the poor fruit-trees. We had a long cold, wet spell—very trying weather for bees—and had it come earlier it would no doubt have been very bad for them; but the fine start they had, had made them strong enough to stand the test. We did not lose a single colony, and the middle of May found all strong enough for supers. But continued cold days with but little chance for flight, caused some let-up in brood-rearing.

The first white clover blossom was seen May 18th—earlier than ever before. That means bees will begin storing from the abundant lay-out of clover May 28—if there is any nectar in the clover. Will dandelions continue until that time?

Apple and Honey Drink

Praktischer Wegweiser gives a recipe for a preparation that is said to be an excellent remedy for a cough or cold. One would judge that it has at least the recommendation that it is not hard to take. It is as follows:

Cut up 6 ripe apples without paring, and pour over them a quart of boiling water. Cover, and let stand for a day. Pour off the liquid, add the juice of 1 to 3 lemons, and sweeten to taste with honey.

Poor Season in 1909—Stealing Honey

Although the year 1909 did not prove a success financially, I made enough from the sale of the poor honey the bees worked so hard to find, to pay for 5 colonies of bees, and keep John in honey, which he dearly loves to spread thickly on his pancakes mornings. It was a bad season for people as well as bees. I hope that 1910 will be a success. We bid good-bye to the failure of 1909.

I enjoyed a laughable experience last season. One hot day in July, as we were eating dinner, I heard screams from the direction of the apiary. Running out, I saw a man who was cutting brush across the road, striking at a small boy with a brush, and the boy was yelling, "They have stung me again!" I put on my bee-dress, grabbed the ammonia bottle, and ran to the road. I said, "You were after my honey." He replied, "George said to lift up the lid and get some honey." George was getting badly stung, too. I told him to run out through the field of growing corn and the bees would leave him, which he did.

The little boy was badly stung, and will never try to steal any more honey. His father said he was afraid of a black fly now.

Ima.

Ohio.

Bees Killing Each Other—Sulphur Treatment for Bee-Paralysis

I have 2 old colonies of bees. In 1908 I bought one colony of pure Italians with a tested queen. Last year I took 72 pounds of fine comb honey and got one fine swarm, both of which are very strong, but they have been killing each other all winter, and still keep it up; one colony has lost 2 good swarms, the other one. The new ones are killing each other just the same. Others in in the neighborhood are complaining of the same trouble. What causes it?

Mrs. F. L. Stephens.

Mart, Tex., April 29.

It sounds a little like robbing, but robbing would hardly be so long continued, and so general. It may be bee-paralysis, the bees dragging out the diseased members. If it is paralysis the affected bees will shake their wings in a trembling manner, and have a black, shiny appearance.

Many cures have been reported only to fail when tried again. Perhaps the most hopeful treatment is that used by Mr. O. O. Poppleton, who has had much experience with the disease. It is given in the "A B C and X Y Z of Bee Culture." One plan that he uses is as follows:

He sprinkles sulphur over the affected bees and combs, but not until all the brood in the diseased colony has been removed and put into a strong, healthy one; for Mr. Poppleton says the sulphur kills all the unsealed brood and eggs; that no harm results in putting the brood among healthy bees, as he finds the source of the malady is not in the brood or combs, for he has put combs from paralytic colonies repeatedly into healthy ones, and never (but once) did the disease develop in any such colony, and that was a year afterward.

Another plan is this: He forms as many nuclei from strong, healthy colonies as there are sick colonies to be treated. As soon as the nuclei have young laying queens, he gives to each, as fast as they can take care of them, one or two frames of the oldest capped brood from each of the paralytic colonies, and thereafter till all the brood of such colonies is used up. The diseased bees and queen he next destroys with sulphur fumes, fumigating the hives at the same time.

A Little Bee-Sister—Honey Crop Almost a Failure in 1909

Honey here was almost a failure last year. My average per colony in comb for 1908 was 130 pounds; for 1909 40 pounds. I am sending you a picture of my little girl, Lucile Johnson, 10 years old, handling the Caucasians. She has helped me in the work for two seasons, and has never had a veil on.

Miss Lucile Johnson.

I can't do without the American Bee Journal. I consider "Dr. Miller's Question-Box" alone is worth all it costs.

Keokuk Co., Iowa. M. D. Johnson.

Why Did Bees Die?—Using Hives Where Bees Died in Winter

I had 4 colonies of bees last fall; I have only 2 now. The ones which died seemed weak. I could not find any queen-cells in one (last year's swarm), and no queen in the other one (2 years old). The hives were very full of honey, and they seemed to be very clean. What was the trouble?

The 2 colonies are very busy, all young and healthy. What time ought I to uncover the bees for the summer work?

The fruit-trees have been full of bloom, but the heavy frost destroyed them. Will there be plenty of white clover this year?

Can we use the frames of the hive we have from the colony that died, or will it be better to start with a fresh, new box-hive?

Can we get a colony of bees to stay in a hive where other bees have been, if we wash it thoroughly with salt and water?

Mrs. E. P. Day.

Bloomington, Ill., April 27.

It is impossible to say why the 2 colonies died. Queenlessness may have been the trouble; they may have died because so weak; or there may have been some other trouble.

When bees are wintered outdoors, if there is no danger of their running short of stores, it is just as well to leave the covering on until nearly time to put on sections, or until white clover begins to bloom.

The prospect for a white clover crop this year is very good.

By all means use the old frames and hives. They are very valuable. Of course, if the bees died of foul brood or any infectious disease, then they should not be used again; but probably there is no such trouble with your bees.

If hive and combs are clean, a swarm will prefer them to anything new. There is no need to use salt water or anything else if they are clean. If dirty, wash with clear water. When a swarm is hived, either in new or old hives, if a frame of brood is given it will make the bees more sure to stay.

End-Spaced Frames—Top-Bar Thickness

Miss Mathilde Candler says in the Bee-Keepers' Review:

Some time ago I sent for some Langstroth brood-frames. They shipped me the short top-bar variety. I do not like these, as I do not want spacers in the frames, and without spacers they slip down in whenever I tip the hive. I tried lengthening the top-bar, by driving a staple in the end; but gradually the staple will work down into the wood.

Nor do I think it necessary that the top-bar should be so heavy. I have a few frames with top-bar only ⅞x⅜, and they seem to be every bit as good as those with a heavy top-bar. Yet I do think ⅜-inch a bit light, and would prefer to be on the safe side and have them a *little* thicker. [7-16 suits me.—Editor.]

It would be interesting to know just why so practical a sister as Miss Candler objects to spacers at the ends of frames. Of course a short top-bar without them is utterly out of the question, for that would allow the frames to be constantly dropping down. Even with the spacers some have complained of the frames dropping down, but that must be because there is some fault in the construction of the hives, for in this locality there is never any trouble, although such frames entirely have been in use for years, and we would dislike very much to go back to the long top-bars. Miss Candler tried lengthening the short top-bars by driving staples into the end of them. Is it perhaps just possible that she tried the staples in no other way? We have them driven into the end-bars, close up against the top-bars. The grain of the wood runs there in such direction that the staple will not gradually be driven in as it will in the top-bar.

The difference between Editor Hutchinson's 7-16 top-bar and the ⅜ bar is only 1-16. Either one works all right for a time; most of them for always. But in the course of time some of them will sag, and sag badly; at least the ⅜ ones will, for we had more than 2000 of them years ago. Even if they should never sag, we prefer the thicker top-bars (⅞) for the sake of the whiter sections where they are thus made farther from the brood-combs. For extracted honey the case is different. But we had to have excluders or honey-boards with the thin top-bars, and that's reason enough against them.

Canadian Beedom

Conducted by J. L. Byer, Mount Joy, Ontario, Canada.

The Cold, Backward Spring

The weather pessimist now has his innings, and can say, "I told you so," to his heart's content. During all the balmy weather we had during March and the forepart of April, of course the usual prophets were around trying to spoil our enjoyment of the lovely days by telling us that we would "pay up for this in May," and for once at least their gloomy forebodings have come true.

Since April 20 we have had very cool weather all the time, with torrential rains for the first half of this period. The result is that instead of a very early season, as spoken of in my last bunch of notes, with apple-blossoms likely to open by May 1st, here it is May 18th and only the early varieties, such as the Duchess, showing open bloom.

Very strong colonies have kept us from the necessity of doing much feeding, as whenever the bees get an hour or two they can work, they carry in enough to keep them going. At this date (May 18) I venture to say that there is not 500 pounds of old honey in the 300 colonies, yet so far I have fed but 300 pounds of sugar. The colonies were all very heavy last fall, but the early warm weather, with heavy breeding as a consequence, explains matters. Naturally I am in hopes that the weather will clear off in time for the bees to get some honey from the apple-bloom, to carry them along till the clover opens.

During all this cool weather we have had but very few frosts, and as the fruit-bloom was not advanced far enough, very little if any damage has been done. Judging from reports from some of the middle West and Northern States, those sections have not been so fortunate in this respect.

Temper of Bees—Carni-Italians the Best

It is, I believe, generally conceded that the temper of the worker-bee is inherited from the male parent; in other words, a queen bred from a cross colony and then mated with a drone from a very quiet colony, will produce quiet bees. While I have been aware of this teaching for some time, yet I never, till this spring, have seen how forcibly true this rule works out in practice.

Two years ago two dozen Carniolans were introduced in an apiary where the black blood previously was, if anything, in the majority. This spring a number of the Carniolans have been superseded, and in a few cases the young queens have met black drones, the worker-bees showing this by their color and *temper*, as they are decidedly ugly—much worse than the pure black colonies. On the other hand, a number of the black queens have been superseded, too, and on opening the hives of these colonies it was a happy surprise to find that the young queens had met Carniolans, and that the worker-bees were very quiet, most of them being marked so that I could destroy the old queens on account of the bees being so ugly, and now the bees in these same hives are among the gentlest in the yard.

Fortunately, but few of the Carniolans met black drones, and it will be noticed that the Carniolans will more than hold their own in this respect, as the drones seem to be very powerful on the wing, and, as a rule, a large percentage of queens reared in a yard where there are some Carniolans, will be found to have met drones of this race of bees.

Some of the best bees I have ever owned, all things considered, have been bred from Italian queens that have mated with Carniolan drones, and if I were asked what is the "best bee," I certainly would say the first cross of Italian queens with Carniolan drones. Unfortunately the next crosses are not nearly so uniform in good points as is this first cross.

That Busy Bee-Man Byer

The weather continues *very* backward, and apple-blossoms are just ready to open, having been held in the bud for 4 weeks.

Bees are very strong, but the weather is so bad that I cannot get queens clipped and supers on. When we do get a few warm hours (not days) we have to get such a hustle on that it is certainly nerve racking. Among my 300 colonies, at least 250 are ready for supers now—have 125 on now.

I have clipped 220 queens, and have 80 more to clip, so if I had 2 warm days I could get on top again. Then I have about 2 weeks' inspection work mapped out—about a dozen people wanting me to come to their places all at the same time. But there is no use in worrying over what cannot be helped, so I will just do the best I can, and let go undone what I cannot do.

[No, Mr. Byer didn't put that heading on the above item. But it seems to fit him all right.—Editor.]

The Balling of Queens

Just what causes some bees, sometimes, to ball their queens on the slightest disturbance of the hives has always been a question to me, and this spring the matter has been brought to my mind again in a forcible manner. Owing to the cold, backward weather we have had all through May, it has been a difficult matter to get all the queens clipped and supers put on previous to my going away on some inspection work that was imperative. As a consequence, we have been opening brood-nests when the weather was hardly fit for the purpose, and at times when little nectar was coming in.

In 3 or 4 different colonies a few bees were noticed running after the queen, some of them clinging to her, and in one case, after taking all the frames out and looking them over, a glance at the bottom of the hive revealed a ball of bees about as large as a walnut. The queen was released, and after a while let go on a comb on the opposite side of the hive, but yesterday, being at the yard again, I looked at the entrance, and sure enough there was the dead queen. Now this colony was a very gentle one of Carniolans, not at all excitable, and when the hive was open the bees were quietly sitting on the combs, paying very little attention to anything.

Former experiences with queens being balled, has generally, if not always, been noticed in colonies very much excited, with the bees running in every direction, as is common in the blacks or hybrids if they get in a panic from having too much smoke given them, or from other causes.

In watching the actions of the few colonies that were so foolishly solicitous of the queen's welfare, I was reminded of that work entitled, "Are Bees Reflex Machines?" as all the bees in the hive would seem to be actuated by a common desire over which they have no control.

If the queen that was receiving such undue attention on the part of her subjects happened to be on the side of the hive, the same nervous demonstrations on the part of the bees would be seen if she was removed to the opposite side. In brief, the bees seemed to be a unit, so to speak, and in some mysterious manner the same fear of losing their queen seemed common to the whole crowd. How such a condition is made possible among many thousands of bees in a simultaneous manner seems a great mystery, and it would seem that they have some means of communication that we mortals do not understand.

All have noticed the peculiar "home

is found" hum when bees are contentedly entering into a hive after having swarmed, and even in a more pronounced manner is the hopeless, queenless hum noticeable in a colony that has just lost its queen—is it possible that they have also a call that sounds a warning to all the bees in the hive that the queen is in danger? It looks very much like it, and more's the pity that they do not take more sensible measures to protect her in her peril, fancied or otherwise, than simply to embrace and smother her to death.

In the event of the queen being released before death ensues, why is it that she is generally useless afterwards, as is nearly always the case, according to what I have learned from others, coupled with a few experiences of my own.

Three years ago at the Altona yard I had a queen in one of my best colonies balled, and although she was released in less than half a minute after being attacked, and safely introduced that evening again, yet the queen laid only a few eggs afterwards, and was superseded in 2 or 3 weeks. She was not stung, in so far as I could see, but in some way she had been injured, and, if I am correct, what happened to that queen after being balled is the common lot of other queens thus treated.

I have always been very much adverse to opening hives during unfavorable weather, particularly in the spring, and the results of this spring's work during such weather only serves to intensify my feelings on that line.

Let me repeat once more what I have often said before, that early spring manipulation of the hives causes the death of many valuable queens each spring. This advice is of course only for beginners—others have learned the truth of the same through experience.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

Bulk-Comb Honey Production—The Comb Foundation

This is a most important subject in connection with profitable bulk-comb honey production—one upon much depends whether we are successful in obtaining the maximum quantity of a gilt-edge article; one upon which not enough importance is placed by a great many, even experienced bee-keepers.

There was a time when I thought starters were sufficient during a honey-flow, since much wax would be secreted and would otherwise go to waste if the bees were not given a chance to use it. But one single experiment, and that an accidental one, proved to me the importance, yea, more, *that the use of full sheets of comb foundation was most essential and profitable at all times and under all conditions;* for the extensive bee-keeper at least.

It might be admitted that there are certain times and conditions during which a lesser use of foundation may be profitable, but that belongs entirely to another class of bee-keepers from ours. They are those whose numbers of colonies are small, and who have abundant time to be watchful of such occasions. This can not be done by those with numbers of apiaries, and these in as many different localities, with perhaps as many different honey-sources. This is my condition exactly, and being so situated has given me occasion to observe. It has taught *me* to use *full sheets of foundation at all times, both in supers and brood-chambers. It pays, and pays big.*

The picture (Fig. I) gives an idea of my operations when putting in the full sheets of foundation. The large pile of supers are already filled. Note in the foreground a charcoal furnace on 3 legs. On this is a pan of melted wax. Immediately between this and the pile of 4 supers notice a seat with a cushion on it; this can barely be seen. I want you to get an idea as to just where the operator sits—almost facing toward the furnace, and having the wax in easy reach to the right.

In front of the operator, to the left, within easy reach, is a frame-rack upon which the frames are placed for filling. Notice the 3 slanting guide-boards of it just in front of the small tree in the picture. These things will be described more fully further along. My desire now is that you locate the position of these things as I use them, so you will understand them satisfactorily.

As described, the operator has the pile of 4 supers shown with empty frames, to his right. These empty frames pass from here to the frame-rack, and, when filled, to the pile to the left of him, thus filling one super after another as they are emptied on his right.

Now I will fix the fire-pot as I use it instead of the furnace shown in the picture. Fig. 2 will explain this. It is nothing less than a 5-gallon honey-can with a large opening for the pan of wax. On each side are large ventilator holes made by "jamming" a heavy-pointed instrument through the tin. Inside the can rests a square piece of tin, with like holes through it, on two rods of iron extending through two sides of the can as shown. This acts as a grate upon which I make the fire. Charcoal, corn-cobs, or chips of wood are used for fuel. A wire handle fastened as shown finishes the stove.

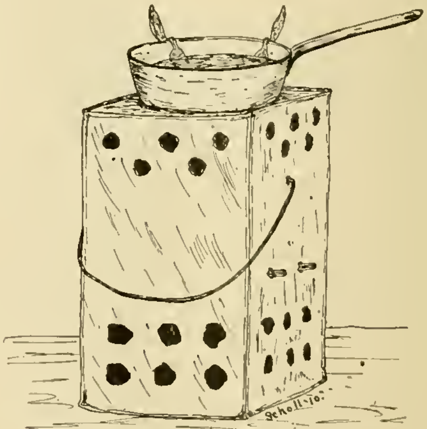
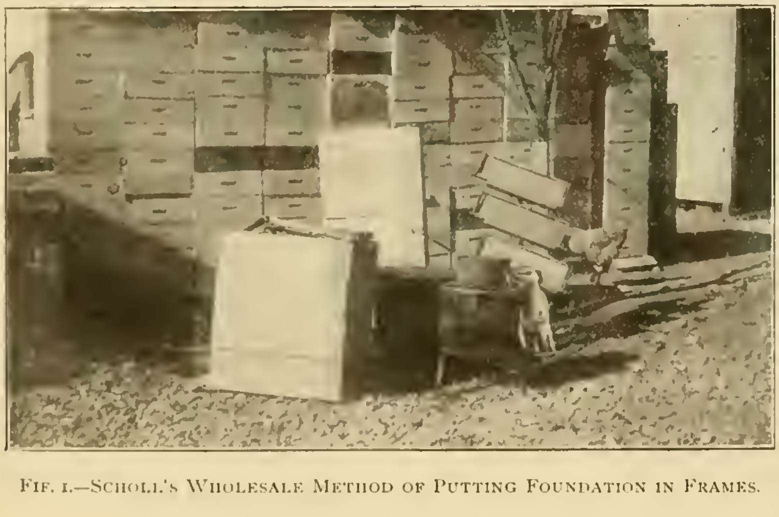


Fig. 2.—Scholl's Fire-Pot.

Of course there are many others, and perhaps better ways of heating the wax, but it must be remembered that in an extensive business, as mine is, with 26 apiaries, and these widely scattered, it is impracticable to have things just the best. Small oil-stoves or gasoline heaters are fine, but as we can not always carry them along, or have them where wanted, we must have something at each place. Hence, *something cheap* must be adopted, and old, rusty, worn-out honey-cans fill the bill for me.

A very cheap, 10-cent stew-pan is used for melting the wax; using a quantity of water in it to prevent scorching. For this work I use all kinds of scrap and inferior wax not fit for the market, hence I gain an advantage here. An important matter is to have a good quantity of melted wax at



Fif. 1.—Scholl's Wholesale Method of Putting Foundation in Frames.

all times for fast work. Do not "piddle" with a tomato-can or an oil-lamp, etc.

Fig. 3 shows one of my spoons, with a narrow lip, and bent handle. The latter enables me to hang it over the edge of the pan, always in *reach, and never in the wax*, as shown in Fig. 2. The narrowed lip is made by beating with a hammer, and guides the wax into a narrow stream. The size is large enough to hold enough wax to fasten one sheet with each spoonful. It is a very common tin soup-spoon, and costs 10 cents a dozen.

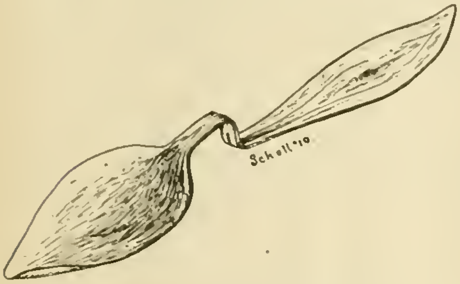


Fig. 3.—Scholl's Wax-Spoon.

Now the rack (Fig. 4) receives an inverted frame as indicated by the dotted lines. A full sheet of foundation is laid inside of it, the slanting guide-board placing it centrally in the top-bar. A spoon of melted wax runs down the incline and fastens it. While this is cooling another is fixed on the second board, then another on the third. Now the first is removed to the empty super to the left of the operator, and another frame is put in its place on the rack, and so on all day long, or filling thousands of frames with full sheets of foundation.

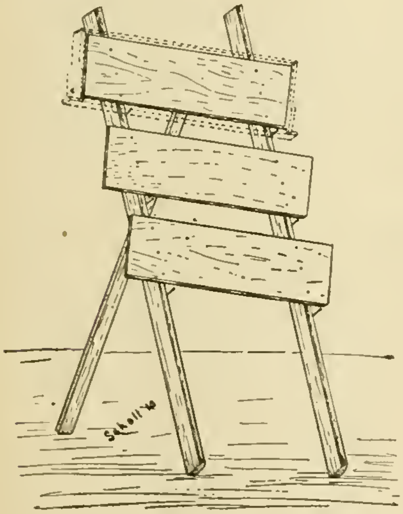
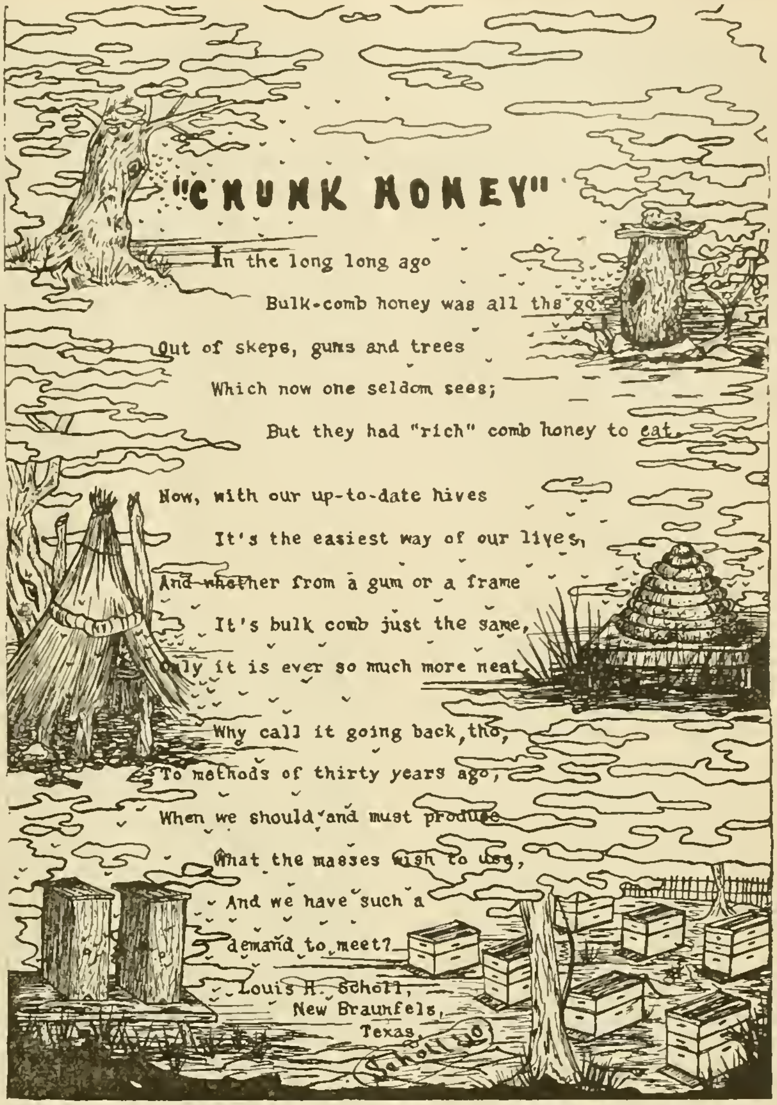


Fig. 4.—Scholl's Frame-Rack.

As the supers become empty on the right of the operator, they are placed to the left and refilled again, making it necessary to begin with only one empty super at the start.



"CHUNK HONEY"

In the long long ago
Bulk-comb honey was all the go
Out of skeps, gums and trees
Which now one seldom sees;
But they had "rich" comb honey to eat.

Now, with our up-to-date hives
It's the easiest way of our lives,
And whether from a gum or a frame
It's bulk comb just the same,
Only it is ever so much more neat.

Why call it going back, tho,
To methods of thirty years ago,
When we should and must produce
What the masses wish to use,
And we have such a
demand to meet?

Louis H. Scholl,
New Braunfels,
Texas.

Contributed Articles

Chunk, Section and Extracted Honey

BY DR. G. BOHRER.

On page 51 of the American Bee Journal, Mr. T. A. Crabill takes exceptions to the production of chunk honey, on the ground that it is going back to where our fathers stood 75 or more years ago. And as far as putting honey into bulk with combs broken, he is entirely correct; but the honey is now taken from the hives as surplus and put up in receptacles prepared for the purpose of putting honey upon the market. He fails to report in detail the difference between bulk honey as now put upon the market and 75 years ago. Then, dark combs lined with cocoons, wormy cells containing pollen, and not infrequently larvæ and mature dead bees, were found. All of this occurred on account of the honey being taken from the brood-nest, where dark and white comb containing honey, pollen and larvæ, were almost inseparable.

It was then the general custom to suffocate the bees over a brimstone pit, or to get honey from trees in which absconding bees had taken up quarters, and, as a rule, an undesirable mass was, and is yet, obtained in all such cases. Such a thing as extracted honey was not known. Such pieces of comb as presented such an uninviting appearance as would render it certain that no one would think of masticating and appropriating it as food, were sometimes put into a sack, put through the squeezing process, and what was called "strained honey" was obtained. It often contained pollen, I know to be a fact, and if I ever heard any one say that the juice of an occasional dead bee, as well as that of larvæ, worked its way through the strainer and became a part of the so-called strained honey, I never contradicted the assertion. But the invention of the movable-comb hive, and its general introduction among all intelligent bee-keepers, together with the extractor, has banished the custom of entering the brood-nest for comb honey.

The many other advantages of the movable comb Mr. Crabill should not overlook. The manner in which Mr. Scholl and others of the comb-honey class of bee-keepers secure honey, does not, in any particular, point to the brimstone period and method of securing comb honey. When it is fully understood it is the cheaper method of securing comb honey, I am fully convinced, as it requires less labor upon the part of the bee-keeper; there is no annual putting together of frames, as the same set of frames will last indefinitely, while in the section method new sections must be purchased, put together, provided with starters and section-holders, must be carefully scraped and adjusted to receive the sections. The comb honey received from shallow frames is quite as white as that stored in sections, and it is as free from dark comb, cocoons and pollen as section honey is certain to be, for to put it upon the market in any other shape would sound its death-knell in short order.

But the great objection to bulk honey is that the combs are pressed together and are covered with honey poured over and around them in the cans or jars it is packed in, which simply deprives it of its solid, unbroken cappings, which are simply ornamental. But when the consumer buys a pound of it he gets 16 ounces, while the sections, I think, are retailed by the piece and fall short from a fractional part of an ounce to several ounces. But isn't extracted honey produced a little cheaper than either section or bulk-comb honey? To me it seems that the time and labor required to extract honey will cost less than the comb taken from the bees with bulk-comb honey, as much time, labor and honey are consumed in replacing the comb taken from the bees with the honey; and, aside from all this, beeswax or honey-comb is in no sense a component part of any food, it being wholly indigestible.

Then, to view section-comb honey, bulk-comb honey, and extracted honey from whatever standpoint I may, section honey is the most ornamental, but the most expensive. Bulk-comb honey ranks second in the matter of cost of production, and extracted the cheapest; and if any real difference in the quality the latter is the most wholesome; but all three methods are far in advance of the antiquated customs practiced 75 years ago, and I feel quite convinced that Mr. Crabill will see matters in the same light when he comes to note all the facts that have followed the invention and introduction of the movable-comb bee-hive.

As to the matter of super frames, both Mr. Scholl and Mr. Dadant favor the shallow pattern. It is true the bees can warm a shallow super to the temperature necessary to enable them to construct comb, with a much smaller number of bees and warmth than must be had when building comb in a deeper super; but when the combs have once been constructed, I have been able to note but little if any difference in the matter of storing the combs of either deep or shallow supers with honey; and therefore use mostly 2-story hives, and feel quite certain that when the upper story is really required I have less trouble in getting bees to work above the brood-nest. I never put on the upper story until the brood-nest is quite populous, then when a honey-flow is on I put on the upper story and raise a frame or two of brood up into the super or upper story. This not only puts the bees to work above, but, with me, it seems to put a quietus on the swarming impulse, and secures more honey.

The popularity of the different shapes of honey for the market is largely a matter of education.

Lyons, Kan.

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Numbering the Hives—Keeping Record-Books

BY O. B. METCALFE.

(*"The New Mexico Chap."*)

For the past year or so there has been some discussion of numbers for hives, and of the record-book. I think every professional bee-keeper should keep a note-book in which he may jot down, from his experience, things worth remembering, and if he rears his own queens, he should number and keep some record of such colonies as he may desire to use for breeding purposes.

Numbering *all* hives and keeping their record as to queen-cells and such details, I do not think practical for a man with as many as a thousand colonies, or perhaps less.

The numbering-every-hive-and-keeping-its-record system, as it has been discussed, is supposed to enable the bee-keeper, when his breakfast is swallowed, to look at his record-book and see where he should go to work that morning. Such a system would, last spring and summer, have called me every morning to about half a dozen different yards at once, varying in distance from one to 8 miles apart. Not being able to "scatter out" that way, being systematically informed as to just how things were, might have put me in the insane asylum.

I think I hear Mr. Doolittle say, "I told you so!" for two years ago, when I asked him how I was to control swarming in some 1500 colonies by myself, explaining that experienced help was not to be had in my locality, he advised me to sell all but 500 colonies, and no doubt the readers of bee-papers generally would have thought his advice wise. I did not, however, sell any of them, and nearly 75 tons of honey that fall—20,000 pounds of comb and the balance extracted—showed either wisdom or luck.

I have always been a true Westerner. I will "make it or lose it." When my partner and I decided to go into the bee-business, we carefully read "A B C of Bee-Culture" (something no beginner can afford to omit); but after noting that it advised beginners not to try more than 20 colonies, we went and bought 300 3-frame nuclei. I knew a drone when I saw it, and had once seen a bee that I felt pretty sure must have been a queen; my partner had never seen a drone or a queen. That fall we bought 1200 colonies more. My partner and his extracting crew (usually a couple of Mexicans who cannot speak English) take off and extract the honey, and to me falls practically all the manipulation. Most of the time I am "on top," but once last spring they "got me down." That is a common expression out here, but it seldom fits quite so well, for the bees were in great bunches on the tops of the trees, and I on the ground frantically trying to get them back down. This time I pressed my partner, my brother (who was with us a month or so about that time), and a Mexican boy, into the "manipulation," as I term all work with the bees, except the taking off of honey and preparing it for market.

Well, getting back to my subject, and cutting short a long story that is probably more interesting to me than to others, I will say, at a rough guess, that it would take about one-fourth of each day to make and refer to such a record of our hives as, for example, Dr. Miller keeps of his. I could not possibly spare that time, and yet I believe I am a practical bee-keeper, and that I keep a large number of colonies of bees in a practical way.

The marking system I use is about as follows: I carry a large crayon of the paraffin kind in my pocket, and with that I check-mark or write on the hives. To attract immediate attention, I use a green weed. When I walk into a yard and see a weed that is beginning to look old, without having been taken off and thrown down, I know I am late there, and I "get busy." I do not even keep a record of which yard to go to next, and I can generally say to myself, "I should have gone to yard——, 2 or 3 days ago." When I get there things have gone a little wrong; I right them as quickly as I can, and go to the next yard. I love the work, and consider that my partner has the hard and disagreeable task.

MARKING HIVES WITH AN ARROW.

It was my great pleasure, last summer, to have with me in my home Mr. W. H. Laws, of Texas, and among the many valuable hints he gave me, I recall a marking system which I shall try this season in one yard at least. The plan was to nail, on one side or end of the hive, a wooden arrow about 6 inches long, by driving one nail through the center of it. The arrow can be revolved to indicate different things; for example, if the arrow points up, it indicates that all was well at the last visit, both in regard to queen and super-room; if turned ⅛ of a revolution to the left, the colony was preparing to swarm; ¼ to the left, it had swarmed and needed watching to see that the new queen was all right; ½ turn, or pointing down, denotes queenlessness. Turning to the right refers to super-room which is needed in the degree indicated by the number of degrees turned; if nearly to the bottom on the right side, a super was needed without delay, etc.

By walking out in front of a row of hives thus marked, I could see 15 or 20 steps away where I was most needed, and what for. It seems to me just the marking system for my system of keeping bees.

Mesilla Park, New Mex.

No. 1.—Heartsease and Spanish-Needle

BY C. P. DADANT.

I saw in the February number of the American Bee Journal that Spanish-needle is a great honey-plant; and that heartsease is also. I am desirous of learning more about them. There is no Spanish-needle around here, at least I never saw any of it. Nor is there any heartsease, unless it is the common weed we call smartweed; I rather think that is it, but I am not sure of it. I have seen bees work on the smartweed, but they seem to gather but very little honey from it. Heartsease may resemble it in some respects, and not be it; I am not sure about it. Does the Spanish-needle grow seed? and does it grow from seed? If it does, can you tell me where I can get the seed?

I am going to move my bee-yard to a place 20 miles from here, where I will have an unlimited range for them. I will be 5 miles from any other bee-keeper. I can there keep 100 colonies, and more, if I can care for them. There is a fine flow from fruit-bloom and clover, raspberries, blackberries, poplar and basswood, buckwheat, goldenrod and aster. I can also get a good stand of Spanish-needle and heartsease, as there is considerable land that is not cultivated. If these plants can be grown from seed, and if they will grow here, I will endeavor to have them sown and see how they will do.

I saw an account of white sage as a honey-plant. Where can I obtain that seed? I want to make the place a first-class bee-country, as I think I will spend the remainder of my days there. I have always liked bees, and enjoy handling them. Any information in regard to honey-producing plants will be very thankfully received by me.

New Jersey. WM. E. HOUSEL.

Heartsease and Spanish-needle are the best wild blossoms for the production of fall honey along the Mississippi River. Perhaps this statement could be truthfully extended to the entire Mississippi Valley, but as both plants thrive best in wet lands, the low lands of the Mississippi and Missouri Rivers are also their best home.

"Heartsease" is to some extent a misnomer. Gray's Botany and the Century Dictionary both agree in giving the name "heartsease" to a violet—*Viola tricolor*—the pansy. The Century adds: "In some parts of the United States the common persicaria, peachwort, lady's thumb or smartweed, *Polygonum Persicaria*." It is to this genus of plants that we refer when we speak of the "heartsease, smartweed, knotweed, persicaria, etc." According to the Century, there are about 50 species of the persicaria, which I do not doubt judging from the numerous different varieties which occur on low lands. The Century devotes to this genus of plants a half column which is instructive to peruse.

The name "Polygonum Persicaria" is a very good description of the plants, when we refer to the etymology. "Polygonum" is derived from two Greek words "polus," signifying "many," and "gonu," "knee, knot," a plant with many knots, each joint of the stem looking indeed like a knot. The other name, "persicaria," is from the Latin "persicarius," a peach-tree. This name was given to the plant from the resemblance of its leaves to the leaves of a peach-tree in their shape.

The ordinary persicaria of the fields is a sweet plant which cattle eat readily. It does not grow very plentifully on grazing lands owing to this fact, for it is readily destroyed. It thrives mainly in wet stubble-fields after the wheat, rye or oats have been removed. The low lands of the Mississippi River, which overflow more or less periodically, produce it in abundance. I have often seen it take the place of crops when the latter are destroyed by the June rise of the Mississippi, and then it grows so luxuriantly that I have seen it attain a height of 5 feet or more. During the summer of 1880, the Mississippi River covered the lowlands to such an extent that it broke through several of the levees built to protect the crops. Thousands of acres in Hancock and Adams County, in Illinois, were overflowed, and the crops entirely destroyed, for the water remained on the land until well into July. At the same time our uplands were burning up with an unusual drouth, and the bees that were located on the hills were threatened with starvation. The combs were absolutely dry in August. I took occasion of this to try migratory bee-keeping.

HEARTSEASE.

About Aug. 15 we transported to the low lands below Warsaw, 105 colonies, traveling with our teams during the night time in order to avoid endangering the life of our bees by day confinement. The bees which were thus brought in the midst of thousands of acres of heartsease gathered a splendid crop of light-colored honey. Within 15 minutes after their release from the hive we could see them on the flowers in every direction. These weeds were so thrifty that they stood as high as the backs of our horses—a perfect sea of blossoms. I never saw bees in such rush. They appeared as if intoxicated by their good luck.

The heartsease is, however, not generally regarded as a first-class honey-plant. Dr. Miller, in his "Forty Years Among the Bees," gives a very good cut of it, page 171, but says on page 122:

> "The summer of 1902 was very wet, and for the first time in my observation heartsease was busily worked upon by the bees."

This is certainly not a very good recommendation, coming from so experienced a man as Dr. Miller. But the Doctor is not located where this plant is most abundant or successful. On the other hand, the "A B C of Bee Culture" says of the heartsease that it yields "in Nebraska and other States in that section, immense quantities of honey." This work cites a Nebraska bee-keeper who harvested an average of 250 pounds per colony one year from this source. Our own experience with it has been very favorable, although the plant is not a regular producer of large crops. I believe, with Dr. Miller, that it takes moist seasons to get the maximum from its blossoms.

As there are a number of different species, varying with the soil, the climate and the season, there is also a variation in the grade of honey that it produces. For this reason contradictory reports have been made regarding the color of the honey. Some people have held it to be as white as white clover honey, while others reported it as amber. In our own case we found it slightly darker than white clover, but of a light pinkish tint. I believe its color would be reported upon more favorably by the average apiarist, were it not that its bloom often runs into the blooming time of Spanish-needles, and the two kinds are often mixed.

There is but little doubt that the Persicaria, in one species or another, is to be found in many parts of the United States. The botanical works mention some species as native of the New England States, others as growing from Michigan to Kentucky. A number of species are native of Europe, and a cultivated species, Polygonum Orientale, produces very large leaves and beautiful clusters of flowers. The bees work on it regularly.

One of the peculiarities of our heartsease, as of the smartweed, is that the petals do not fall after the seed has formed, but retain their color, white or pink, until long after the seed has formed and ripened, so that you may find a blackened ripe seed within a corolla that to all appearances is fit to yield honey.

The smartweed is not to be considered a good honey-producer; although the bees work on it at times, they do not appear to stop on its blossoms long. Its name is derived from its juice, and for that same reason it has also received the incongruous denominations of "culrage" and "arse-smart" (Century Dictionary). Its botanical name is *Polygonum acre*. Another variety is *Polygonum hydropiper*—water-pepper.

Outside of the Persicaria there are other honey-producers in the family of Polygonaceas, the leading of which is our buckwheat. The observing bee-keeper has probably noticed its resemblance to the heartsease in the "knots" of the stem, the shapes of the blossom and of the seed.

The Persicarias are fully as common in Europe as in America, but I have never heard of them as great honey-producers on the European Continent. They have a certain credit as medicinal plants, and in Russia, India, China and Japan, the leaves and the roots are employed for making dyes. (United States Dispensatory.)

The Grand Dictionnaire Larousse mentions the plants of this family as good soil-enrichers. I believe this is correct, for I have often seen buckwheat grown purposely to plow under as they do with red clover.

This article being longer than I anticipated, I will mention the Spanish-needle in another number.

Hamilton, Ill.

Increase vs. Honey-Production

BY LEO E. GATELEY.

Shall the professional honey-producer set aside certain colonies for making necessary increase, or shall the entire apiary contribute toward such an end? This is a question that I have never settled to my complete satisfaction, and is one, I believe, which must, to a great extent, depend upon conditions.

By setting apart a share of the apiary to be used for increase, those remaining can be kept in an ideal condition for storing surplus; but in order to prevent swarming among such colonies, when run for section honey, it becomes necessary either to practice shook-swarming, or at one time or another, deprive the bees of all or most of their brood. Where only a small increase is desired, it can be supplied by this removed brood with no appreciable effect upon the amount of surplus secured.

As soon as the hives are well populated, whether the honey-flow is on or not, I place over each colony a second story of empty combs or foundation. This will delay swarming until the queen has moved up into the top hive. By the time this occurs there should be quite a flow on, and the upper story with the queen can be removed to a new stand. The lower story is then given a ripe cell or virgin from choice stock, and a super added. As the hive on the old stand now contains sealed brood only, it cannot swarm as there are neither eggs nor larvæ from which to start cells. The return of the field-bees from the top-story so diminishes their force that all danger of their swarming is removed. The emerging brood left upon the original stand, reinforcing the field-force, work in the sections will go forward with a rush.

The old queen and bees in the new hive should by winter build up into a fair colony; but if so great an increase should prove undesirable, the top stories can, as they are removed, be tiered up to any depth without quarreling, and all of the old queens will be killed but one.

This method of management I find secures a crop of honey equal to any, supplies young queens to a good share of the apiary, furnishes sufficient increase, totally prevents swarming, and keeps all of the original number of colonies at work in the sections.

As most of my colonies are in sectional hives, another plan is used to prevent swarming with such. Like the first, it involves the removal of brood, but this is taken away gradually, one division at a time, and the old queen is left upon the original stand.

My preference for such methods of increase arises chiefly from the fact that there is so little labor connected with them. There is no handling of frames whatever, and if no more than 100 percent increase is needed, it can be formed without lessening the honey crop in the slightest, and while performing only necessary operations in the production of the crop.

If a greater increase is needed, a division of the brood removed can, under favorable circumstances, be made, but it would in all probability be found advisable then to adopt other measures, even though they involve some trouble and expense. In fact, the foregoing plan is not so much in line with the requirements of those wishing to build up an apiary quickly, as it is suitable to the practical honey-producer who does not care to have his increase interfere with his business of securing the largest possible yields of surplus.

Sebastian Co., Ark.

Hatching of a Queen-Bee's Egg

BY G. M. DOOLITTLE.

"I see that you sometimes answer questions in the American Bee Journal, giving some length to the answer. There is something which I wish to know more about, and I thought that Doolittle might be able to shed some light on the matter. It is this: How do the bees hatch the eggs which the queen lays? Or is this question worded wrong? Let me put it another way: Do the eggs laid by the queen honey-bee hatch of themselves the same as do the eggs of our birds and barnyard fowls, just from the warmth they are exposed to during incubation? or do the bees, by some secret of their own, cause them to hatch? Again, How long can the eggs the queen lays be kept and then hatch?"—A CORRESPONDENT.

These questions are very interesting, and those on which I have often thought I would experiment, but when the rush of the season comes on I find that many of the scientific things I desire to look after have to step to one side from the pressure which is brought to bear from the dollar-and-cent point of the apiary; for, say what we will, the harvest of queens, bees and honey is the main "lever" resting under all of our work with the bees. With the hope that some one not having so much to do as I have, will take this matter up and carry it further than it has been my lot to do, I will try to tell all I know in this matter.

Several years ago there came a dearth of honey just when it was necessary that the eggs laid by the queens should be matured into bees, if I was to have the maximum number of bees on the stage of action when the flowers giving my harvest of white honey were in bloom. Being anxious for the best results I watched carefully to see that the eggs laid by the queen were hatching into larvæ, and these larvæ fed till sealed up; for years of observation had told me that with the sealing up of a cell containing a larva, such was the same as insured for a perfect bee about 12 days later, if no unforeseen accident happened to that colony. That when the bees considered it necessary to retrench in brood-rearing from any cause, that retrenchment was always begun through a limitation of the eggs allowed to hatch, and lastly by withholding the proper food from the queen so as to restrict her egg-laying.

After the dearth above spoken of had been on for a few days, I found that the larvæ were being scrimped of food, and a day or two later all of the brood contained in any of the hives was in the egg or sealed-brood form. Desiring to do the best possible with the bees, I commenced to feed about half of the colonies, hoping to see the eggs hatch; but from some reason those colonies fed refused to do anything different from those not fed. All of the days were cloudy and cool, so that the bees were kept confined to the hives, except as those fed would fly for a time after the warm feed was poured into the feeders. I have always thought that had I commenced the feeding before the bees began to scrimp the food of the larvæ they would have gone right on, the same as if there was no dearth of nectar caused by this cool, cloudy spell which was of two weeks duration. However this might be, I noticed at every examination of the hives that there was an unusual number of eggs being retained in the combs, aggregating many more than there were before the dearth commenced, as the queen filled with eggs very many of the cells from which the larvæ were removed, while those on the outside of the brood-circle were still retained.

It now came off bright and warm, and in less than 3 days—that necessary for the incubation of the eggs of the queen—the combs were teeming with larvæ to an extent never before observed, the largest larvæ being on the outside of the brood-circle, instead of on the inside, or next to the sealed brood, as is usually the case. I carefully inspected these combs, holding one for some time, and watching the bees put their heads into the cells. I next fixed my gaze on a certain place where the eggs and hatched larvæ ran along side by side in two rows of cells matching each other for some 2 inches, when a bee put its head into one of the cells containing an egg. Immediately on the withdrawal of the head, I peered in and saw that the "shell" of the egg was wet, apparently with the milky food the larva was fed on. I marked this cell, and on looking a few minutes later found the shell partly melted away, as nearly as I can describe it, and the smallest larva I had ever witnessed lying on the part of the shell under it, still, in a measure, intact.

From this and other observations similar to it, I have always believed that the bees hatched the eggs laid by the queen by their manipulation of the larval food on part or all of their surface, something in the way the capsules containing medicine are melted with the saliva coming in contact with them when swallowed by a patient. The experiment I had planned to use to prove this matter was to put a clean comb into a colony of bees, leaving it till the queen had filled it with eggs, and a few of these eggs had hatched into larvæ, when this comb was to be placed in a wire-cloth nursery-cage, put in a strong colony and left a few hours or over night.

The next morning, by placing some of the larval food on the eggs immediately surrounding the larvæ, by means of a dropper or the little stick used in putting the royal jelly into queen-cups, then setting the frame back in the nursery for an hour or so, this should tell whether what I believe to be true was a real fact. Of one thing I am certain, which is, that eggs taken from the bees will never hatch from simple warmth, for I have watched time and time again, both in the lamp-nursery and in a wire-cloth nursery left with a strong colony of bees, and never knew of one hatching.

From the observation as given, of the egg which I see apparently hatching, it would seem that larvæ never really hatch; or, to put it in another form, the eggs of the queen-bee do not hatch, but are liberated by the action of the food which is placed upon the egg by the nurse-bee. This seems reasonable; the larvæ having no means of biting or breaking their way out of the prison walls that surround them.

Again, all of my observations have failed to reveal the "shells" of eggs in any cells in any bee's mouth (as would be the case if the bees removed them), or in any part of the hive. So I conclude that the action of the food upon the "shells" cause them to melt away, as it were, and mix with this food, all of which is consumed by the growing larvæ.

Who can give us more light on this interesting subject? As to how long the queen's eggs can be kept and still hatch, I am unable to say. I have stored combs of drone-brood in the cellar with a view of killing the brood there, and had both the eggs and capped brood mature after being a week away from the bees; but the larvæ were killed.

Borodino, N. Y.

5.---Bee-Talks for Beginners

BY JIMSON RAGWEED, OF INDIANA.

Texas Honey—Price of Honey.

Mr. Jimson Ragweed:—If Texas produces so much honey, why do we not see more of it on the market? What do you think is the reason that the price of honey does not advance in proportion with eggs, butter, pork, etc.?

How is Sam getting along since his term at college?
Yours,
Amos Cumbsome.

Dear Amos:—Your postal card to hand. Texas really does produce an immense amount of honey, and the quality is fine, but they consume it themselves, especially since the producers have got to putting up chunk honey. When they have a good thing in Texas they keep it themselves.

In my opinion, the price of honey has held its own. Improved facilities with increased numbers of colonies have increased the production wonderfully, and under ordinary circumstances this would mean a decline in prices.

Sammy is getting along fine. He can play feet-ball, and they say he is fine on roller skates. One of the students asked him what business I follow, and Sammy told him I have an apiary. And then they asked Sammy what an apiary is, and Sammy told them it was a place where apes are kept! When asked what an aviary is, he told them it is the place where Wright Brothers keep their air-ships. Today Sammy is sprouting the potatoes in the cellar, but he did not like it much because Thursea brought up the pan of doughnuts while he was working there.

Truly yours, Jimson Ragweed.

Label for Honey-Jars.

Mr. Jimson Ragweed:—I wish to get a new label for my honey-jars. What kind of a label would you recommend? I would like one so fine that the grocer would place my goods to the front.

Manda sends her love to Thursea.
Yours, John Johnson.

Dear John:—I do not know that I can tell you very much about labels, but I would get an oval label rather than a square one, because it can be placed more rapidly without the corners curling up. I would suggest that you have your photo engraved and use it in the center of your label. An advertising man told me once that your own picture makes the very best possible advertisement. A bee is all right, but all bees look alike, but there is but one John Johnson, and the uglier one is, the better the advertisement. On this account you might ask Manda if the suggestion appeals to her.

Yours truly, Jimson Ragweed.

Attending Bee-Conventions.

Mr. Jimson Ragweed:—What do you think about attending bee-conventions? I thought the one up at Indianapolis was fine, but I did not fancy that banquet business at the Hotel English. I noticed four men speaking German before I had been there 5 minutes, and I thought that seemed funny for an English hotel. Even the waiter looked at me inquiringly and said "table dote?" The bill of fare, which they called a "menu card," had a peculiar list on it, the first item being cranberry sauce and roast turkey; but the very next item was sucking pig and apple sauce. The idea of us sitting down to a table and sucking a pig was too much for me, and when Ras Smith took a drink of water from the finger-bowl I nudged him, and we went over by the hay-market where we each had a piece of pie and a glass of milk. No more banquets for Ras or me.

Yours truly, Amzi Cragg.

Dear Amzi:—I believe it pays to attend the bee-conventions, and your support will help others. I confess that I realize the most benefit at a convention from the social part, or the little talks and hand-shakings during the intermissions, and I find many men of excellent ideas who do not get up and talk. Whenever I go to a bee-convention I always connect many pleasant memories with the meeting for years to come. The first bee-convention that I ever attended was across the river in Kentucky, and the late Father Langstroth was in attendance. One man got up and told how the king-birds were eating his bees, and how he was shooting the birds, and I guess we all thought the thing to do was to get the gun and kill all the birds that came around. Mr. Langstroth then took the floor, and in his kind and impressive way urged them not to kill the birds. Older readers who have heard him will never forget his wonderful power as an impressive speaker, and to hear him was well worth a long journey.

Jimson Ragweed.

Mixing or Drifting of Bees.

Mr. Jimson Ragweed:—My hives are arranged in long rows, and very close together, and at times the bees mix. I would like to overcome this, and I wish you would give me your ideas about it.

Neighbor Newt Plumb sends his regards to you, and says to tell you that he is rearing lots of queens this year. Newt has issued a circular about his bees and honey, but the printer made two bad mistakes. Last year Newt sold 10 untested queens to one man, and all proved to be purely mated, and Newt used his letter in his circular, but the printer used the word *poorly* instead of *purely*. In the part about his honey he wanted to say no *foul brood* in his locality, but the printer has it no *pure food* in his locality. Newt is sending them out anyhow.

Truly yours, Ephram Jones.

Dear Ephram:—The nicest way that I have ever discovered to arrange hives so bees will not mix is to place the hives in groups of three. The bees seem to remember the end hives and the center hive without any confusion. I use scantling 2x4 and 6 feet long, placing them on bricks so the hives will be 5 or 6 inches above the ground. Use a spirit-level, and have the front of the hive an inch lower than the rear.

Very truly, Jimson Ragweed.

Ordering Bee-Supplies.

Mr. Jimson Ragweed:—You know I told you about the long delay in getting my supplies last year. We got entirely out of hives right at swarming time, and Angeline hived one swarm in one of her bureau drawers, and another in an old churn. This year I ordered early.

How do you arrange your alighting-boards? Mine are always falling down, and weeds and spiders occupy the underside.

Truly yours, Tilford Moots.

Dear Tilford:—I use tin alighting-boards to all of my hives, and Thursea and I made them ourselves by unsoldering some quart fruit-cans, bending the edge to an angle and soldering a wire-nail at each end. We drove an end-space staple over each nail, which makes a hinge, and we can turn them up against the hive while we run the lawn-mower close to the hive. We painted them one coat and then sprinkled them with sand; and then another coat of paint, and this gives the bees a good foot-hold. I sometimes sprinkle a little salt around the entrance which keeps down weeds and grass. During the winter snows I turn these alighting-boards up against the hives, which still permits an abundance of ventilation, and prevents having the entrance closed with snow.

Very truly, Jimson Ragweed.

Control of Queen-Fertilization

A Chicago bee-keeper is working on a plan to control the flight of queens and drones, which looks feasible enough to insure the pure mating of over 75 percent of the queens. He has explained this procedure to the editor of the American Bee Journal, and as soon as he has experimented sufficiently he will describe his methods in these columns. He has also discussed it with a number of bee-keepers during the past year, and all feel that it must prove successful.

The copies of "Honey as a Heath Food" that I have used have about doubled my sale of honey. Geo. H. Coulson.
Cherokee, Okla., Oct. 26, 1909.

California Reflections

Conducted by W. A. Pryal, Station E, Oakland, California.

The Season and Prospects

We never had such a fine year for vegetation; never did grass grow, flowers bloom and bees hum as they have been doing this season. What the product of the bee-hives will be I know not. There are signs that there are going to be many cool nights, and if so the secretion of nectar will be greatly lessened. But the growth the plants are making this year will stand them in good stead next year, even if the rainfall then should be less than the average. Toward the end of April we had some very hot days; the bees started to swarm in a terrific manner. It was good the hot spell did not last more than 4 days, otherwise I should have been swamped with swarms. After this warm spell the bees got down to normal conditions.

Strange, just at the time we were having our hottest weather, the Middle West was having a cold snap—killing frosts in some places. While this may be good for our fruit-growers, still, I am sorry that such a calamity overtook those Eastern growers. Too many of them will lose heavily. The cultivator of the soil can never afford to lose a crop; he has too many calls for the use of his hard-earned money to suffer such loss. It is so here; I am sure it is the same the world over.

Hornets, Bees, and Ignorance

The correspondent of the American Bee Journal who dubbed the writer of the hornet article "ignorant," in the April issue, struck a far more reaching blow at the "ignorant" class of bee-lights than he probably intended. I have been looking up all the authorities on bee-keeping in my possession, and I find that every one of them, American and English, who have anything at all to relate about wasps and hornets, say that they (the hornets) should be destroyed. And none of them gave as strong evidence against these insects as did the writer hereof, and for which "assault" on the "person and character" of the hornet Mr. Latham rather ungentlemanly started to abuse me, in the doing of which he also whacked the good men who wrote our principal bee-books. I don't know but I should thank the very learned gentleman for putting me in such distinguished company. He evidently stirred up a bigger hornets'-nest than he bargained for.

I still hold to my contention, that hornets are injurious to fruit; they pester the honey-house, and everlastingly get into the honey in their thievish propensity to pilfer that sweet. At times of the year they are bothersome to the bees, sometimes even attacking and killing them. Of course, the trouble from his source is never serious; it is, however, so to the honey-room and the fuit-crop. One thing about a hornet is that he is the most determined of robbers; he will poke and nose about a honey-house until he finds some small crack through which he can crowd his miserable little carcass into the place where the honey is stored. It seems to me that one will work about the outside of a honey-house all day until he manages to secure an entrance. This a bee will never do, for a bee generally wants to get to the sweets right off; if she finds her ingress blocked she will take her busy little self to other pastures—pastures probably far more pleasant and better for her health.

At another time I may present some strong evidence to show that we of this State are not disposed to raise hornets to fatten on "wormy"-steaks; we shall leave that profitable business to the learned correspondent and defender of the thievish and abominable hornet. In doing this I won't dispute that the hornet may have some good traits—so have nearly all the members of the robber profession, both in and out of jail; those traits are at their best, however, when the owners are asleep, or when they are dead.

Wild Radish as a Bee-Plant

One of our most common weeds is the wild radish. I believe it is found all over the length and breadth of the State; I have seen immense patches of it in bloom at Santa Barbara in April. About the San Francisco bay counties it is sometimes a pest, though with careful cultivation it can be subjugated in a few years. It blooms here during April and May, and furnishes a large quantity of nectar. The flavor is not altogether bad; in fact, it is considered very good. This plant is not a native, but was introduced here at probably the time of the Spanish occupation of the country. There seems to be several varieties, one or two of which is very strong-growing, and the roots attain large size. It may be possible that these are of oriental origin. While an annual the plant will live for several years, I believe, by cutting off the tops before the seed matures.

Blossoms of Wild Radish.

It would be well to destroy this wild radish wherever found, by cutting it bodily, as it is a useless weed except that it has value to bee-keepers, but to no one else that I know of.

Vale Ye Portrait Headings

I hail with much pleasure the disappearance of the headings used in the departments of this Journal up to and including the March number. On the adoption of the old headings, or shortly thereafter, I filed with the publishers my objections to this style of headings, especially the photographic use of my "phiz" in connection with the heading over the department I have been allowed to inflict upon the good readers of the "Old Reliable" these several years. I did this not that the publication of said "phiz" would lead to my detection and incarceration for "high crimes and misdemeanors," or that I was loath to be seen in company with the class of individuals that appeared elsewhere in the Journal, or, even, that I felt myself so much better than the other individuals that I did not want to rub up against them through the medium of printers' ink and white paper—no, not for any of these reasons, but for the simple one that I considered that it appeared a conceited idea to have one's picture forever paraded before the public. But my objections were voted down by ye Editor. I was asked to let the heading run until a complete change was made throughout the Journal, and I reluctantly consented.

I make the foregoing comments this time, for some reader of this magazine has been so good as to call the attention of both Mr. T. B. Terry and the editor of the Practical Farmer to the fact that my "phiz" was monthly decorating the pages of the "Old Reliable." And I was therefore called "inconsistent." All because I objected in a mild and gentlemanly way to certain features in the make-up of the said Practical Farmer, one of which was the use of headings much after the style of the late ones of the American Bee Journal. With the publication of my letter setting forth my reasons for such unnecessary use of portraits in the way mentioned, the paper thereupon and ever since has abandoned their use. But with their going the editor has been dying hard; he has taken occasion several times to let himself down easy; also to make digs at me for my intimation that Mr. Terry is too prone to be boosting things elsewhere advertised in the issues of the Practical Farmer. Any one who knows anything about the inside management of a publication office, knows that a "puff" or "boost" is never given an article advertised except for good and sufficient reasons best known to the business department. We all know that publishers are not engaged in printing a paper just for the fun of it, or even for their health, if you will. Of course, I must admit that there are times when reading notices or puffs are admitted without any compensation; usually, however, as intimated, there is some ulterior reason for such notice, especially when an advertisement of the article noticed is displayed elsewhere in the paper.

In making these comments I must say that I have a very high regard for Mr. Terry and his work; also for the usefulness of the Practical Farmer, but I cannot sever Mr. T.'s connection with the editorial department of the paper from the business office, no matter how much the editor and Mr. T.'s friends may think the latter is above writing puffs on demand of the business department of the paper.

Several readers of the said Farmer have written me in praise of the stand I have taken. Anyway, I have it to my credit, though perhaps not altogether deserved, of having had a hand in ousting department portraits from two great papers, to-wit the American Bee Journal and the Practical Farmer. Oh, no; never mind the thanks! I was doing simply what I considered my duty.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
Dr. C. C. Miller, Marengo, Ill.
He does not answer bee-keeping questions by mail.

Reinforced Comb Foundation

1. Is the reinforced comb foundation safe with two wires in a Langstroth frame in the brood-nest?

2. Is the extra-thin surplus reinforced comb foundation drawn out quicker in cool nights, like in Nevada, than the thin surplus comb foundation?

3. Is the midrib less in it than in comb foundation not reinforced? and do bee-supply dealers and manufacturers of comb foundation offer to sell it? UTAH.

Answers.—1. It ought to be safe with almost any kind of reinforcing, although I do not know to what kind of reinforcing you refer.

2. I don't think I ever before heard of extra-thin surplus reinforced foundation, but I don't think it would be drawn out quicker than other foundation

3. I don't understand this, and I don't think I ever saw such foundation for sale.

What Ailed the Bees?

I have found that about ⅔ of the bees of this locality died with the brood-chambers full of honey, with no brood. What was the cause?

I had 2 swarms of bees this spring by May 4. INDIANA.

Answer.—You do not say when the bees died. One would naturally suppose in the winter; only you say there was no brood in the hive, and that looks a little as if they died in the spring after brood ought to be present. It is of course impossible to say without knowing more about the case, but if they died in winter it might be that they starved to death with much honey in the hive, because the steady cold so long continued did not allow them to leave the cluster to reach out where the honey was. Again, the trouble may have been diarrhea. Of course, one would not expect brood in the hives in winter; but if they died after time for brood in the spring, I don't know what the trouble was. It might be queenlessness, only that would hardly be on so large a scale.

A regular swarm as far north as you are so early as May 4 is something remarkable; but this was a very remarkable season.

Dequeening—Queen-Cells for Requeening

1. Is it a good practice, if working for extracted honey, to requeen by dequeening *shortly before the close* of the main honey-flow, if followed by two months with little nectar and then enough fall honey for wintering?

2. Will a sealed, or nearly sealed, queen-cell, *at the close* of the honey-flow, be accepted shortly after dequeening to the exclusion of cell-building?

3. Would it be an advantage to give more than one queen-cell? VIRGINIA.

Answers.—1. Yes, with a string to the answer. Some, perhaps, would have no string. But I wouldn't like to dequeen a colony that had a good queen, unless I felt sure she would get a better one. Even if you give a young queen reared from choice stock, you are not always certain of any improvement since you don't know what drone she may mate with. It is safer to requeen only the third or half of the apiary that has done poorest work.

2. If the queen-cell be unsealed, or sealed only a short time, you may count on other cells being started, with possibly swarming as soon as the virgin from the cell given is ready to go with the swarm. If the virgin is nearly ready to emerge, although cells may be started there is more likelihood that the bees will tear them down. Something depends upon how dearthy the dearth of honey is. The safest thing is to give a virgin that is not more than 12 hours out of the cell.

3. Yes, and no. If either cell were bad, as sometimes happens, the other cell would make all right. But with 2 cells, there might be the chance of swarming.

Queen-Cells and Swarming

1. At what stage in the development of queen-cells are bees apt to swarm? How long before or how long after being capped over?

2. Am I correct in my understanding that they are capped over 7 days after the eggs have been placed in them?

3. Is there any way of determining accurately the age of the larva, or, in other words, how long it has been in process of development, without waiting for it to be sealed over? NEW JERSEY.

Answers.—1. About the time the first queen-cell is sealed. Of course it may be delayed after that time if weather is unfavorable.

2. It is possible that in some cases matters may be hurried as much as that, but the rule is: 3 days in the egg, and then 5 days of feeding. That would make 8 days after the laying of the egg.

3. Nothing very definite. In general terms it may be said that the larva makes most of its growth in the last 2 days of its 5 days of larval existence; and I think it doesn't cover the bottom of the cell till after it is 3 days old.

Starting With Bees

1. Would you recommend a full colony or a 3-frame nucleus with a tested queen for a beginner?

2. Will you kindly explain how to handle the super when examining the brood-frames?

3. Would you start with common black bees and a good Italian queen, or with all Italian bees? PEORIA.

Answers.—1. Get the full colony if you can get one near at hand. If you have to send off a distance, get the nucleus, as expressage on a full colony would make it very expensive. If you care nothing for expense, get the full colony in either case.

2. I suppose you want to know what is done with the super while you are examining the frames. Set it with one end on the ground, the other leaning against the body of a tree that is within reach, or against another hive, or even against the hive at which you are working. Of course the bottom of the super will face toward the tree or other object of support. Another way is to place the cover of the hive flat on the ground and stand the super on one end on the cover. This applies only when the cover is flat. Or set the super on end on another hive. If there is danger of robbers troubling, put an empty hive or super on the ground close by, put the super or supers on that in the same position in which they were on the hive, and then cover over.

3. A little better to start with the whole business Italian, but in 6 weeks all will be Italian anyhow provided the queen is Italian

Swarm Prevention and Increase

1. What do you think of this plan for swarming prevention and increase at the same time? Go to a big colony, which is taking care of queen-cells preparatory to swarming, and lift out say 3 frames of brood with the queen, and place them in another hive for increase, and give the parent colony a queen-cell of some desired strain from which to rear their queen, taking care that all the older cells were first destroyed?

2. Do you favor placing the new swarm on the old stand when a natural swarm has issued, setting the old one a few feet away? ILLINOIS.

Answers.—1. The plan will work. You don't say what you will leave on the old stand. Better leave on the old stand the queen with the 2 or 3 frames of brood, and put the rest on a new stand.

2. Yes, but still better it is to set the old hive close to the swarm which has been put on the old stand, and move the old hive to a new stand a week or so later.

Growing Yellow Sweet Clover

There is some sweet clover in this vicinity, of the white variety, which yields a good quality of honey for a month or more. White clover is our main dependence for honey. There is very little basswood here, but considerable fruit-bloom, which yields some nectar in favorable seasons, to be divided among 7 bee-keepers within a radius of 5 miles, some of whom shamefully neglect their bees, and lose the greater part of their new swarms which go to the woods. Several have lost all their bees by not giving them the proper protection during the winter. Kindly give me the address of some one who grows yellow sweet clover for seed, as I wish to purchase 20 or 30 pounds for experimental purposes on my new farm of 80 acres. I bought it this spring. It is located about 4½ miles from here, and I intend to move my bees next December, when I take possession. MICHIGAN.

Answer.—I do not know of any one now who has yellow sweet clover seed, but likely some one will advertise it for sale in this journal, as has been the case in the past. Coming 2 or 3 weeks eariler than the white sweet clover, the yellow is of great value where there is a scarcity of common white clover, or in years when white clover blooms, and yields no honey.

T-Supers—Shallow Frames for Chunk Honey

1. In answer to a correspondent, you said it would be better to make the T-super 17¼ inches instead of 17⅜ inches as you gave me. Have you tried that length? It seems to me that there is a surplus room to wedge. Will you tell me how you wedge, if one end or both? What kind of wedge do you use? I wedged some with the broken sections or any little pieces; wedged both ends, each row of sections wedged independent of the others. The bees put propolis beside some of the wedged end of the sections.

2. I have read of people producing bulk or chunk honey in shallow frames. What is the depth of the frame, inside measure? I use ½-inch strips to make my frames. Do you think 8-inch lumber will be too deep? The top and bottom pieces, and the ¼-inch space I have would leave the honey 6¾ inches deep. KENTUCKY.

Answers.—1. I use, as you remember, little sticks 12x¼x⅛ or thinner than ⅛) to wedge in at the top between the sections. Well, when the sections fit in at the bottom too loose, they will sometimes drop down at one end, and putting in a wedge at one end, as you speak of, will do nothing to prevent that unless merely by the tightness of the wedging. Instead of wedging at the end, I take one of those little sticks I first mentioned, and put in the angle of one of the T-tins. That virtually makes the bottoms of the sections ⅛-inch longer, and prevents any dropping down at the end.

I have not tried supers 17¼ long, but the fact that I can, and do, shorten some of the 17⅜ ones ⅛ of an inch by putting in the strip

⅛ thick seems to show that 17¼ would be enough. Unfortunately some of my supers are a little more than 17⅜, not being made as accurately as they should have been, although made at a regular hive-factory. No great harm comes from a loose fit if it were not that it allows the sections to drop down at one end.

2. I don't think all producers of bulk honey use frames of the same depth, and it is probably not very important as to the depth. Those who, like Mr. Scholl, use brood-frames prefer, I think, to have the surplus-frames of the same depth as brood-frames. I don't know, but I should suppose, that any one who makes frames any shallower than the regular Langstroth (9⅛) would prefer them still shallower than yours, which are 7¾ inches deep, outside measure, which is only ⅜ of an inch shallower than the Langstroth frame. Wouldn't 6 inches be deep enough for you? That would leave the honey-comb 5 inches deep with top and bottom-bars ½ inch thick. But don't you think a bottom-bar ½ inch thick is unecessarily strong? Most people would be satisfied with ¼ inch.

Queen-Rearing and Swarm-Prevention

1. What method of larvæ transferrence do you use in queen-rearing? Do you think that of transferring cocoons superior to dry cell and jelly?

2. Do you ever raise the back of the inner cover on hives for summer ventilation?

3. Would a good method of requeening and swarm prevention be to take the queen from the colony making preparations, and after they start cells to graft larvæ from the breeder in their cells after destroying the inmate of the cell?

4. What is the best method of transferring bees from a box? ILLINOIS.

ANSWERS.—1. I don't use either way. Formerly I used both ways, and preferred transferring cocoons.

2. I have no inner cover, and I don't raise the cover for ventilation. But I do what is equivalent to it: I let the super come far enough forward to allow a space of ¼ inch for ventilation. This very often through the hot weather. It has its objections when working for comb honey, but the advantages are greater. It has not the same objection for extracting work.

3. In experienced hands the plan ought to work well.

4. Let the colony in the box-hive swarm, and 3 weeks later, when all worker-brood has emerged, break up the hive and melt the combs, adding the bees to the swarm.

May Not Be Foul Brood—Treatment

How far am I off? They say what people don't know don't hurt them, but what I don't know at the present time about European foul brood hurts me beyond compare. First I will try to describe the looks of the brood I suspect of being diseased. Brood in the larval state, probably one in 25, seems to be shriveled, and does not have that clear, white, transparent or watery appearance. Also, the brood in the pupal state should always be capped (as I suppose), but it is not capped, but I can see those purple eyes through a small hole left not sealed, which looks as though they had started their work but had not finished it. But still they seem to be alive; at least, they move their antennæ or feelers, and the mandible, or jaw, although some would not move; they were all intact, firm, and of one color. Still I am satisfied that some of this brood in the larval state is dead. This has come suddenly to me, and I suppose with close attention I can decide whether this is European foul brood or not. But I would like your opinion. The above conditions exist in about 7 colonies out of 90.

The main object with me is to get your judgment on the following treatment that I have been studying over for the last few days:

First, fill a super with chunk-honey frames, drawn combs, or foundation. Go to the diseased colony, remove it from its stand, put said super on the stand in the place of the old hive, shake the same as a shook swarm; put another super on top of this one the following day, with an excluder between (chunk-honey super preferred). Now returning to the old body I will say, set it by the side of said super, and handle on Atchley plan. Of course, I don't expect to follow that plan to a finish, but I will leave enough bees in the body to protect it until the 21 days have expired, then I will shake them and remove the body for 4 days, return it to its own original stand (after removing super), return the bees to it and hatched brood in the super the same as done in the body. My idea is to get some honey and at the same time cure the disease. Yes, I can almost see you smile when you think of those big bunches of pollen I will have in that upper super, but the chunk-honey man gets very handy with the knife, you know. Yes, again, I will not have a glutted brood-chamber with all young queens, with a chance for a record breaker the following year, that is true. I will also add that I don't expect to make honey or money without a big lot of work. But do you think it will cure? and is "the game worth the candle?" OREGON.

ANSWER.—From your description I have some doubt whether your bees have European foul brood. Send a sample of the diseased brood to Dr. E. F. Phillips, Department of Agriculture, Washington, D. C., and you will get positive information. If you write him in advance he will send you a package and frank, so postage will cost you nothing.

I don't know whether your plan will cure, but it doesn't seem to be giving the best chance for a cure. If I understand correctly, you are expecting the bees to clean out the combs, and are leaving only a few bees with the combs to do the cleaning. A weak, discouraged lot of bees can not be expected to be very energetic about cleaning up. If you want to save the combs and also get a crop of honey, why don't you try the Alexander plan, or a modification of it? First, see that the colony is *strong*, or make it so. Remove the queen. Ten days later destroy all queen-cells and give the colony a virgin queen of pure Italian stock, or at least of vigorous stock. But perhaps there is no foul brood among your bees, and by the time this is in print all the bad symptoms will have disappeared, in which case they will not need any treatment.

Relative Merits of Bees

1. What are the relative merits of Golden Italians, 3-banded Italians, Caucasians, and Carniolans, for this region?

2. Having 3-banded Italians, could Caucasian queens be introduced? and would they mix with my present strain?

ILLINOIS.

ANSWERS.—1. Answering in a general way, I should say that the 3-banded Italians were likely to take the lead for good results. Either of the others has its admirers who find it superior to the 3-banded Italians, but others give different testimony. Perhaps this may be because of difference in individual colonies. At any rate, the great majority, I think, consider the 3-banded Italians the ones to tie to.

2. A Caucasian queen could be introduced into a colony of Italians, and there could hardly be said to be mixing in that colony, for in less than 2 months there would be nothing but Caucasians in the hive. But there would be mixing afterward, for the next young queen reared in the Caucasian colony would be likely to meet an Italian drone. Also, Italian virgins in other colonies might meet Caucasian drones.

Questions by a Beginner

1. I purchased a 3-frame nucleus this spring, receiving it May 5. I have been feeding them ever since I got them. Do you think they will be strong enough in about 4 weeks to store any surplus honey, the flow beginning about June 5?

2. Would you think that a 3-frame nucleus would be strong enough colony since May 5 so I could take another 3 frames of brood and bees out of the colony about July 15 and start another colony? Of course, I would have to buy a queen, and get them strong enough for the winter.

3. What is a division-board in a hive for? How is it used, and where would you place it to get the best results?

4. How can you tell a queen from the rest of the bees? Mine are all Italians.

5. I have seen more or less in the American Bee Journal about using 2-story hives. How would this work: Place a hive minus the bottom on top of another hive, and let the queen and bees enter the same as the lower; let them breed in the upper story, and use the lower for stores; that is, do it in the fall of the year? Would you have to leave this upper story on all the time, or could I take it off in the spring? Would such a colony store more honey than in a single story? Which is best? I am a beginner in the bee-line. I had 4 colonies last year and they all died last winter. So I started fresh again this spring with a 3-frame nucleus. I will let you know what luck I have had, some time this fall.

I have been getting the American Bee Journal for 6 months, and I am well pleased with it. If I live long enough I may be a bee-keeper some day. ILLINOIS.

ANSWERS.—1. Quite likely they may. Yet there is nothing certain about it. Something depends upon the strength of the nucleus, for all 3-frame nuclei are not equal in strength. If strong, in as good a season as this promises to be, they ought to yield a a good surplus.

2. Yes, if of good strength, and the season good.

3. A division-board may be used to separate a hive in 2 parts, either to contain 2 colonies or 2 nuclei, or to make the room smaller for the one colony in the hive. Division-boards are not used a great deal. In many apiaries none is used. Dummies are much used, and these are often incorrectly called division-boards. A dummy is a board, generally thin, of the same size as a brood-frame, and having a top-bar. Almost invariably an 8-frame hive contains a dummy. The 8 frames do not quite fill the hive, and the dummy is put in at one side to fill out the vacant space. It is easier to lift out the dummy and then lift out a frame than it would be to lift out a frame if the frames filled the whole space. Ten-frame hives are generally made so they need no dummy. I don't know why.

4. Look for a bee longer than the rest, and with wings that look too short for the length of its abdomen. You'll not be likely to miss it the first time you see it.

5. It wouldn't work the way you seem to expect. Bees like to have their stores above their brood, and if you gave them an upper story they would use that and not the lower one for stores. Whether it would be a good thing to have 2 stories depends upon a good many things—too long a story to go into here.

From some things you say I suspect you have no bee-book. It will be money in your pocket to have one. It might save the cost of the book several times over just in the matter of wintering alone.

Keeping Ants Out of Hives—Clipping Queens

1. What is good to keep ants out of bee-hives? We are bothered with them so much. We shake them off every day, but they don't seem to stay out. Will it hurt the bees?

2. We had a colony that did not have a queen in the spring, and the rest had. When I looked for the queen the next day in the hive which stood near that one, I found the queen had walked over in the queenless hive. Did you ever hear of anything like that?

3. Is it best to clip the queen's wings?

WISCONSIN.

ANSWERS.—1. Generally, the kind of ants that trouble bees in your part of the country do no serious harm. More than anything else, they like to make their nests over the hive because it is warm there. The bees will drive them out themselves, if the bees can get at them. The prevention is to have no place where the bees can not get if ants can get there. If there is a quilt over the frames that closes down so no bee can get above the quilt, and then a cover over that with a crack big enough for the ants to crawl through, that makes the nicest kind of a warm shelter for the ants. Some keep ants out by having legs to the stands, the foot of each leg standing in a little dish containing water or some offensive substance the ants will not crawl through.

2. I'm not sure I ever knew anything exactly like it.

3. I wouldn't like to keep bees without having the queens' wings clipped, and I think most bee-keepers are of the same mind.

A Beginner Asks Some Questions

1. I use foundation starters in all of my new hives. Would you advise the use of a bee-feeder inside of a hive filled with syrup where a new swarm of bees is to be put? and do you think this will bait the bees so that they will not leave the hive, which they sometimes do?

2. They say if a swarm of bees goes southwest and stops, and you hive them, they will stay; but if they go southeast and stop, and you hive them, they will not stay. What is your opinion? or give the reason why?

3. Will bees go in old hives as well as new ones when they have become damp inside

several times, but have never been used before?

4. A neighbor places common boxes up in trees and catches stray swarms. Is there anything a person can put in a hive that will bait a swarm to the box placed in a tree?

5. Will it be all right to cut a small hole on top in the hive-box, and place a screen over it for ventilation when I transfer bees from boxes into new hives?

6. I have a super on a hive with pound-boxes and starters, and have no queen-excluder between. It is filled with bees, and I'm afraid they have drawn out the combs and the queen has deposited eggs in them. What should I do with the super? Put it on the new hive when the bees swarm, or leave it on the old hive?

7. Have bees a location in view before swarming? If so, have they this location prepared ready to enter?

8. Is there a young queen in a hive before the old one leaves with the first swarm? How soon does she take her mating flight? How often does a queen mate in a lifetime?

9. I have some bees that have 2 and 3 yellow stripes or bands across their backs, back of the wings, and are some larger than the blacks; also, more savage. Is there any Italian blood in them?

10. What date of the month is the American Bee Journal published? I get it on the 16th of the month, and can hardly wait until it comes. ILLINOIS.

ANSWERS.—1. If the weather is unfavorable, or if for any reason the bees of a swarm can not gather when they are first hived, it is an excellent plan to feed them. But can you afford to use only starters in your brood-frames? The bees will be pretty sure to build a good deal of drone-comb unless the frames are filled with foundation; and having much drone-comb is expensive business.

2. And what will they do if they go just half way between the two directions? I don't think there's anything in it at all.

3. Yes, if the hives are sweet and clean.

4. Yes, if you can put brood-combs in it. If the combs have been used but are still sweet and clean the bees will like them better than any empty hive.

5. Yes, but it is not necessary.

6. If there is brood in the super, and you want it to continue there, put the super over the swarm as soon as it is hived. If there is no brood in the super, give it to the swarm 2 days later. If you give the super to the swarm before the queen has begun to lay in the brood-chamber, there is danger that she may go up in the super.

7. I don't know. I suspect they generally have a location in view. I've seen them cleaning out a place 2 or 3 days before swarming.

8. Before I forget it, I want to tell you that it will be money in your pocket to buy a good bee-book. It will answer a whole lot of questions about things that you ought to know and may not think to ask about, and the knowledge you would gain on a single point may be worth twice the cost of the book. But I'll answer these questions now, and not make you wait till you get the book, for there will be plenty of other questions to ask after you get the book.

When the first swarm issues there is no young queen in the hive except those in queen-cells. The swarm emerges about the time the oldest queen-cell is sealed. The young queen takes her wedding-flight when she is 5 days old or older. She mates only once in a lifetime; but some say there are exceptions to this rule.

9. Bees with 2 and 3 yellow stripes probably have more Italian than black blood in them.

10. The American Bee Journal is published from the 12th to the 15th of each month. I'm always anxious to see it, too, and sometimes I wish it would come sooner in the month. But if it did, we'd have to wait just as long between meals for the next, so where's the odds?

Getting Bees into Other Hives

Last spring I bought 5 exceptionally strong colonies of bees in large hives. This spring I have been considering different plans for getting them out of the hives. There is the old plan of letting the bees swarm, destroying the queen-cells in the hive, and shaking the bees of the old hive into the new one, when in 21 days none will be left. I have been considering two variations of a different plan, but would like your opinion before putting either into practice.

1. My bees are all very strong, some of them starting work in the second stories. Suppose that about June 1, or when the queen begins laying in the upper hive-body, I put a queen-excluder between the stories. After all the brood has hatched I could remove the lower story filled with honey. Could I put this honey over a colony after the honey-flow and get them to put it into sections by uncapping it? I know they would fill the brood-chamber, but would they go further if several supers were between them and the honey?

2. The other plan I had in view was to put a bee-escape board between the two stories, and put a piece of wire-screen over the old entrance, forcing the bees above as soon as hatched. By this plan, the bees could not fill the lower combs with honey, but would so many bees go above that the brood would not be sufficiently covered? In either case would I need to destroy queen-cells below? Perhaps there is some difficulty that I have not thought of. I shall await your reply with the greatest of interest. ILLINOIS.

ANSWERS.—1. Looks as if it might work; but I've tried it and it was a failure.

2. I don't think there would be so much danger of brood being chilled as there would be of thirst. But you could furnish water. I don't believe it would be necessary to destroy the queen-cells below.

Transferring Bees—Text-Books—Crosswise Combs—Chunk vs. Comb or Extracted, Etc.

1. I have bought 12 colonies of bees in box-hives from a neighbor. I got them at 75 cents per hive. Don't you think I got them cheap?

2. The hives are full of bees, and I want to transfer them. Would you advise me to transfer now, or wait till the old hives are filled with honey?

3. Would you use the old combs, or full sheets of foundation?

4. I am a beginner. What text-books would you get?

5. How do you make queen-candy?

6. I have one colony with combs built crosswise. How would you manage to get them straight?

7. Do you think I could do better running for chunk honey than for comb or extracted?

8. Does it pay to use full sheets of foundation in the brood-nest? GEORGIA.

ANSWERS.—1. If you succeed in everything else in bee-keeping as well as in buying your bees, you ought to beat us all.

2. The honey is in the way in transferring; so you better not wait. Nowadays it is considered better to let the bees swarm, hiving the swarm in a movable-frame hive, setting the swarm on the old stand with the old hive close beside it, a week later moving the old hive to the opposite side, and then 21 days after the swarm issued breaking up the old hive. At that time all the brood will be hatched out except a few drones.

3. By the way I have mentioned you would use foundation.

4. Root's "A B C and X Y Z," "Dadant's Langstroth," and "Cook's Manual" are all good.

5. Warm a little extracted honey, knead into it powdered sugar until you have a stiff dough. Let it stand a day or so, and if it seems a little soft, as it likely will, work in some more sugar until it is stiff.

6. That depends altogether on the condition of affairs. It may be part of the frames are straight and the others only a little crooked. In that case you may be able to cut away the attachments and straighten the comb into its own frame. If all the combs are very crooked, you may consider it as a box-hive.

7. I don't know; but likely you would.

8. Yes, indeed.

Making Increase—Queen-Rearing

I am a beginner in the bee-business. I have some black bees, also some Italians. I would like to know if I could take some queen-cells from the Italians in May or June, and divide the black bees and get an increase of Italians. Those who rear queens seem to quote prices very high. Please give me the best way to introduce the cells, or can I clip the cells and rear some queens?

NORTH CAROLINA.

ANSWER.—You can buy queens for a dollar apiece or less, which doesn't seem very high. If you go into the business of rearing queens you will not make a fortune at such prices. For all that, it is a good thing to know how to rear your own queens. You can utilize the queen-cells from your Italian colonies nicely in the way you propose. Suppose the Italian colony has swarmed. If the weather was favorable for 2 or 3 days before the swarm issued, you may cut out the cells about a week after the issuing of the swarm. But if the weather was rainy or cold for 1, 2, or 3 days before the issuing of the swarm, then you must cut out cells that much earlier, because the swarm may have been delayed by the weather, making the cells just so much more advanced, and if you wait too long you may find the cells destroyed.

About 2 days before you cut out the cells, destroy the queen in any desired colony. Then when you cut out the cells, give one of them to this colony. Use a hive-staple to pin the cell on the side of a comb, letting one leg of the staple be sunk in the comb, while the other holds the cell in place. Let the cell be centrally located so there will be no danger of its being chilled.

If you want to rear some queens, break up the dequeened colony into nuclei, using 2 or 3 frames of brood with adhering bees for each nucleus, and giving it a cell.

"La Loque" or Foul Brood

I am a honey-producer myself on a small scale, and I fear that my bees are suffering from "la loque." If so, how would it be seen, and what is the best remedy or treatment for curing same? CANADA.

ANSWER.—"La loque" is simply the French name for foul brood. A more or less foul odor accompanies it, and the most marked feature is the stringiness of the dead brood. Thrust a tooth-pick into one of the rotten larvæ, and as you draw it out the decayed matter will stick to the tooth-pick and string out an inch or so before it breaks. The usual cure is to take away all the brood at a time when bees are gathering freely, leaving the bees on frames with shallow starters, taking these away 4 days later and replacing them with frames filled with foundation. This is the American foul brood. European foul brood, or black brood, is not generally so foul-smelling, and there is little or no stringiness. It may have the same treatment as the American variety, and it may also have the Alexander treatment, thus: Kill or remove the queen. In 9 days destroy all queen-cells. On the 20th day after removing the old queen, give a ripe queen-cell or a virgin just hatched, the cell or the virgin being of pure Italian stock. Some have reported success by destroying queen-cells 10 days after the removal of the old queen and giving a virgin at the same time. But remember that the Alexander treatment is no good for the American foul brood.

Queen-Cells Above Queen-Excluders

1. Since my first sight of queen-excluders my enthusiasm for them has been at white heat, but rush of work in spring-time has, until the present, prevented my putting them on just at the opening of the sage bloom, which was about April 20 to 24. I placed one on every hive I have above one super high. For reasons that only concern the writer, I left all brood from the egg to maturity above the excluder. Within the usual time it takes to set them, almost every colony was filled above the excluder with queen-cells. I make a quick job of going through them all and destroying the cells. I noticed before I got to the end of my job that the bees had torn them down in some instances, and in some they had not. What would the result have been if I had not destroyed these queen-cells? Would they have superseded the queens? I frankly acknowledge that the matter puzzled me, and that I am still puzzled. CALIFORNIA.

ANSWERS.—1. When brood is put over an excluder, the queen being below, the bees sometimes start queen-cells and sometimes they don't. After starting them, sometimes they destroy them and sometimes they don't. In the cases where they do not destroy the cells, if you had not interfered, a young queen would in time have emerged. Then the remaining cells may have been destroyed, or they may have been left and an attempt made to swarm. The young queen or queens being imprisoned above could not get out with the swarm, but the old queen could, and would. In any case the young queen could not get out to be fertilized, and I don't know what would happen then. Perhaps the bees would worry her to death when they found she was not coming up to their expectations; and perhaps she would go to work as a drone-layer.

Reports and Experiences

Prospects All Right for Honey

I have about 20 colonies of bees. The prospects are all right for a good honey-flow here from white clover, which is just beginning to bloom. **Jas. I. Este.**

Liberty, Mo., May 21

Hard Spring On Bees

I have 31 colonies of bees left. But this has been a hard spring on them. I have been feeding them so as to keep them strong. I notice this morning that they have commenced to gather pollen again.

Monticello, Mo., May 6. **Jas. W. Antrim.**

Bees Wintered Well

My bees are still alive. We are having some of everything but good weather. Bees came out this spring very well, in view of the honey-dew they had for winter stores. I wintered 26 colonies out of 27, outdoors.

J. C. Cunningham.

Streator, Ill., May 16.

Bees Hustling Now

My bees are doing nicely. We have had rather peculiar weather until lately, and now the bees are making up for lost time, as the fruit-trees are in full bloom and seem to be yielding some nectar and lots of pollen.

Sheffield, Ont., May 16. **Tom Cooley.**

Warm and Then Cold

We had warm weather in March, and it was cold in April and May. The early fruit-bloom is ruined. I divided my heaviest colony April 1st, and bought a queen for one part. The result is 2 good colonies that will be ready for the honey-flow.

Waseca, Minn., May 16. **Edwin Ewell.**

Feeding Bees in May

Bees are in a deplorable condition. I have to feed to keep them from starving. Everything was killed by the frost but the clover, which is just beginning to open. I plucked the first heads yesterday, so there is hope for relief from feeding soon. I have about 75 colonies left from from 90 put into winter quarters last fall. **A. Wicherts.**

Matteson, Ill., May 24.

Warm Weather Needed.

The prospect for a good honey crop is very favorable. While the spring has been cold and wet it has been favorable to the growth of white clover, as it seems to branch out and grow better with a cool spring. The fruit-bloom was frozen and killed, as was also the black locust bloom. Bees will be in a starving condition unless the weather clears up soon, as there is no bloom to gather from at the present time. Should the weather turn warm there will be plenty of bloom soon.

My bees wintered better than ever here, as I lost only a few colonies, and none were as much weakened as you would expect after as hard a winter as we had.

W. H. Swearingin.

Epworth, Ky., May 9.

Side-Line Bee-Keeping—Home Market

I still think as much of "Forty Years Among the Bees" as ever. I often have occasion to refer to it, and find it full of useful information on bee-keeping. I have kept bees as a side-line of minor importance ever since the year 1867, with varying success. I use mostly the 10-frame Simplicity hive, wired frames. When I get more than 20 or 30 colonies on hand, I simply smother the rest with brimstone in the fall, extract the honey and keep the empty hives over, away from mice, and use them the following season to hive new swarms, as there is but little demand for bees here; people like the honey well enough, but they dread bee-stings.

I have 23 colonies of Italian and hybrid bees now out of 25, fall count, in chaff and dead-air space hives. I got $50 worth of comb and extracted honey from 9 colonies, spring count, last season. I sold the best section honey at 13½ and 14 cents per pound, also had enough for family use on the table 2 or 3 times a day all the time. I sold my extracted at 75 cents per 2-quart Mason fruit-jar. **Wm. H. Martin.**

Highland, Mich., April 25.

Not Good Spring for Bees

My bees came through in pretty good shape; I had 3 queenless this spring. These were all I lost out of 68 packed in chaff on the summer stands. Last year I wintered 38 colonies and extracted 4000 pounds of honey, besides an increase of 30 swarms. This spring has not been very good for bees. We have had cold, windy weather most of the time when it is not raining, but I had quite a few good, fat combs of honey, and by putting one on flat right over the brood-nest, I have built up some of the weaker colonies in good shape. **R. Rutherford.**

Strange, Ont., May 10.

Bees Facing Starvation

After having a splendid start during March and early April, the bees in this vicinity now face starvation, unless fed heavily. We have had very heavy frost which has killed all fruit-bloom. The only source left is dandelion, and we have practically none of that here. One queen was occupying 5 frames 3 weeks ago; she is laying only in 2 now. The clover came through the winter in splendid condition, and the young clover made a fine start, but although we have had a fine spring since the frost of March, we have not had any rain yet, and the young clover is dying; the old is making no growth, but burning up on the south side of the hills. But we are hoping for the best.

N. P. Anderson.

Eden Prairie, Minn., May 8.

Worthless Bee-Census—Foul Brood

If all the rest of the census enumerators did as the one has done here, we won't know any more about the bee-keeping industry than if there had been no census taken at all. Our enumerator personally knows me. He asked the usual questions until it came to my occupation. I gave it as "Apiarist." He did not ask how many colonies I have, nor anything about the crop of honey or beeswax. When I asked him if he wanted that, he said no; that he would not make out a ranch list.

Foul brood has about cleaned up our bees in this county. There are only 23 colonies left in this (8) precinct, of which I am the bee-inspector.

It has been cold and windy, and the bees have been doing poorly. **G. H. Eversole.**

Flora Vista, New Mex., May 21.

An Unfavorable Spring for Bees

In the spring of 1908 I came out with 50 colonies. It was cold and hard on bees in this northeastern part of Wisconsin, but as soon as the weather warmed up the bees built up quickly, and my crop was 4000 pounds of honey, and the bees had plenty for winter stores. But 1909 was poor. I had that spring 65 colonies that built up nicely for the harvest, but when we thought of getting a crop of honey, and the bees had started nicely to work, it was cut off by drouth, and left us with a very small honey crop of 1200 pounds for 1909, and the bees had to be fed in the fall for winter.

But this spring I have 80 colonies. It is so early that we were from 2 to 3 weeks ahead of other springs. March was so fine that my bees were all out of the cellar on the summer stands on March 21st, and on the 25th bringing in the first pollen. This is earlier than I have seen them do in the 15 years that I have kept bees. The outlook was good, but, oh! April and the first half of May gave them a knock-down, with cold, frost, storm and snow blizzards; the strong colonies held their own, but the weak ones dwindled down to nothing. Now we have fruit-bloom, and we hope to build them up yet to have them ready for a honey crop. Bee-keepers are always hopeful. **C. H. Voight.**

Tisch Mills, Wis., May 21.

From 1 Colony to 30 in One Season

May 20, 1900, a friend of mine, Harry Fort, of Washington Co., N. Y., got a strong colony of Italian bees from me; he wanted more, but I said, "No, let us see how many we can get from one colony." To my astonishment, we were able to increase that one to 30 strong colonies, the bees building all their own comb and rearing nearly all their own queens. We did it by dividing We found it necessary to do some feeding near the close of the season, as the season was a poor one.

In order to give a description of the method followed in making the increase it will be necessary to tell what kind of frames and hives I use. The brood-frame I use is 11⅛ inches deep, and 11⅜ inches long. It is nearly square, and known as the Gallup frame. I consider it the best frame for all purposes ever used. I have used the Langstroth and several other kinds, but do not like them. Bees winter better on the Gallup frames, being deeper. The honey-extractors cost less for this kind of frames, and the combs of honey hang in them the same as they do in the hive, making it easier to extract without much breakage of combs; while with the Langstroth frames very many break out when extracting heavy combs of honey, as they have to stand on end; at least, this has been my experience. Bees build up faster in the spring in Gallup frames, the hives being more compact.

Next is the size of the hive. I use 2 sizes, both of them of my getting up, one an 8-frame hive, which I use when running for increase and to winter bees in. The other 16 frames, being nearly 25 inches long, outside measure, is used for the production of either comb or extracted honey only. This I call my non-swarming hive, and I never had a colony swarm when the hive was tiered up 3 hives high, and only one swarm when it was tiered 2 high, in 30 years that I know of. I make all of my hives with a half-inch above the frames and a half-inch below the frames. The bees winter much better this way. At the top the bees can readily pass to all the combs because they have plenty of room, and the heat is nearly all up there. I also use a cover with a 1-inch hole bored in the center to let the moisture out of the hive in winter. This is all the upward ventilation a strong colony needs. The hole is covered with wire-cloth. In the picture [See upper picture on the front page.—Editor.] you will see the little stones lying over these holes to keep the rain out of the hives. These ideas are original with me. This does away with chaff cushions and cloths of every kind; the bees can be wintered much better without them, as I have tried them and know.

I never use much comb foundation, only starters in the brood-frames and sections. A long time ago I discovered a substantial way of putting starters in the brood-frames without the use of wooden strips. The starter I use and recommend is only ½ inch wide. I like natural combs; they never sag, or at least I never saw it. These bees that I am about to tell you of built all their own combs except the starters.

The queen of the colony Mr. Fort got of me was one of the best layers that I ever saw. On May 29 I went to his place and examined the colony, and found 7 full combs of brood, and one comb full of honey.

Now this is the way I began the increase; I took the best two combs of brood nearest to the hatching and the comb of honey, with plenty of bees on all 3 combs, the queen included, to an empty hive quite a little distance away. I shook the bees from 2 more combs from the old hive into the new, knowing that many of the bees in the hive just made would return to the old hive. I now placed 5 new frames with starters in the hive where the queen was taken from. Note one thing right here, the queen-cells were reared where all the field-workers were. There were none with the queen. One week from this time I made 2 more small colonies from the queenless part, giving each part 2 nice queen-cells. Of course, the old hive with the one comb of brood was fully as strong as any, because most of the field-workers were there. Mr. Fort painted his hives, some of them green, some white, some red. Every young queen mated all right this time, and 4 colonies were soon strong ones. June 26, the hive where the old queen was, was packed full again. I then divided 9 in the same way as I did before, and one week later 2 more were made. July 24 the hive containing the old queen was full again, and I divided it that day, also with quite a number of the old hives, and one week from that time a whole lot were made.

Now we had gotten to a point where we

could go fast, and the yard was soon full. Aug. 28 we divided for the last time. We split 7 of the strongest colonies right in two in the middle as nearly as we could get them that way. Of course, the larger part of the nearest hatching brood was placed in the hives on the new stands with the greater part of the worker-bees; in this case we left the queens at home on the old stands. Of course, all the old field-workers would come back to the old places, and that was just what we wanted, because right here we safely introduced 7 Italian queens. The last colonies divided soon became strong.

When we had done dividing we found we had 31 colonies, but the queen of one of the hives was not laying as well as we thought she ought to, so we killed her and introduced an Italian queen, but failed. We then united this queenless colony with one of the weakest in the yard, which reduced the number to 30 colonies. I verily believe if we had put in young queens in the queenless parts as fast as we divided, we could easily have increased to 50 strong colonies from one.

The parent colony I let Mr. Fort have, I have marked with a point of ink on the cover; you will readily see it in the picture which I send. Mr. Fort's boy is also in the picture.

Twenty-one colonies were packed in dry sawdust, 3 in a box, last fall, in the yard, but fixed so they could fly if the weather was warm enough. The other 9 were put into the cellar to winter. I will send Mr. Fort's letter, and you can see for yourself how they have wintered—almost perfectly. Twenty colonies will be put in non-swarming hives, and run for extracted honey the coming season, and later I will let you know how we get along. The other colonies will be run for increase.

Only 23 colonies can be seen in the picture.

G. H. ADAMS.

Rensselaer Co., N. Y., March 3.

[The letter referred to by Mr. Adams in the above reads as follows:—EDITOR.]

FRIEND ADAMS:—I was glad to hear that your bees wintered successfully. My bees are all alive except one colony. It was the last box we put the bees in. They all had a good flight, and have been out 4 or 5 days lately. This one I spoke about did not fly, so I thought I would look at it. I found it dead. The bees were all on one side of the hive. The honey was all used up. Some bees were deep in the cells. They had honey in the hive, but it was on the other side of the hive, so I guess they starved to death—too cold to move over to the other side. But I think I have done very well so far. My best colony was out terrible—that pride of mine, you know which one that is. I have quite a few colonies that are strong. I looked at those in the cellar the other night, and I found them all right, except, I think, they will need feeding very soon. I have sent for comb foundation, and expect it this week. Do you think I would better put water out where the bees can get at it, and flour? What kind of flour, if any? When should I take the bees out of the cellar? Have you taken yours out yet? You said you were going to take yours out in March this year. I will make my hives in April. Write as soon as you can because I depend all upon you.

H. FORT.

Washington Co., N. Y., March 10.

[We received the following from Mr. Adams May 7, which contains a further reference to Mr. Fort and his bees.—EDITOR.]

DEAR MR. YORK:—Mr. Fort had a large swarm from one of his colonies a week ago today (April 28). Washington County is one of the northern counties of New York State. I doubt if this ever happened before in all the ages of the past in this northern county. All of Mr. Fort's colonies are very strong—all ready to swarm.

Everything seems to be supernatural—beyond my comprehension. In all my experience I have never seen the like. I have never had a swarm of bees in April, and never had them swarm until the latter part of May.

Twenty of Mr. Fort's colonies will be put in the largest hives known—16 Gallup frames to the hive—and will be tiered 3 hives high, and run for extracted honey. The balance will be run for increase. I will try to keep you informed regarding this superior yard of bees—how much honey they store, and the amount of increase secured.

G. H. ADAMS.

Rensselaer Co., N. Y., May 5.

Wintered Well—Early Season

Nov. 15, 1909, I put 29 colonies of bees into the cellar, and on the morning of March 23d I took them out of the cellar and found that all had wintered in excellent condition. By placing them back on the same stands which they had occupied the previous season, there was no confusion or mixing of the bees. Upon examining the frames after the bees had had their first flight, March 13, I found brood in 1 to 3 frames in every hive, and when I examined them April 9, the brood was increased to 3 frames in the weakest, and 7 in the strongest. If the fine weather continues, bees will have the swarming mania before the middle of May. I am using a bottom-board with a space of 2 inches beneath the frames, and owing to neglect I failed to put false bottoms in place until April 9, and, as a consequence, the bees in the strongest colonies built comb between the bottoms of the frames and the hive-bottom, and the queens were laying eggs in the cells as soon as the cells were anywhere near completed. So, according to the rapidity in which the bees are building up, the weather, pollen, and nectar must be in excellent condition in this part of Illinois. The prospect for a clover crop is fine, the young clovers are plentiful, and I saw a few early clover blossoms April 10. What do you think of that for being early in the season?

C. J. GLENN.

Geneseo, Ill., April 22.

[We think that is altogether too early, especially so as winter seems to have come again. It was snowing hard in Chicago on April 25, at 4 p.m., and was quite cold.—ED.]

Bees Doing Well

My bees are doing as well as I ever saw bees do at this time of the year. I have 78 colonies, 68 strong and fine. I have had 30 swarms, hived 15 in new hives, and turned back the rest.

MRS. CARRIE BRANCH.

Ennis, Tex., May 2.

Reading and Hoping

My 100 colonies of bees are strong and on the *qui vive*. They seem too anxious to work right on through the comet's tail. The land is carpeted with white clover. But, alas! the weather is cloudy and cold. But I am reading the American Bee Journal, and hoping.

J. H. COLLINS.

Bardwell, Ky., May 17.

A Discouraging Prospect

I will say that we are going to experience a very bad year in regard to honey. It will be a totally dry year for our bees this year. I have 135 colonies, and I have to feed all. There are still over half that have to be fed, and if they can make their living until next year they would do very fine. The prospect of storing honey this year in this country has already come to a close. The bees can hardly find enough honey to make their living. No rain.

LOUIS YANNER.

Santa Susanna, Cal., May 14.

Distance for Pure Queen-Mating

Some think that to secure pure mating of queens there must be no other bees within 10 or 12 miles. I think it all depends upon the location. I keep 50 colonies here in a small valley or pocket in the hill, and ½ mile from me, over the hill, there are a few colonies of black bees. As I requeen every 2 years, I replace 25 queens each year; and I have kept a strict account of the mating of my queens, and for a term of 7 years I have 24 out of 25 purely mated. I rear my queens in small nuclei. I place a virgin in the nucleus, a perforated zinc excluder over the entrance to prevent the queen from falling out of the box before she can fly, and when she is 3 days old I remove the zinc to let her take her bridal trip. One day when I removed the zinc the queen came out, and after making a few circles around the hive she flew away. I sat down to watch to see how long she would be gone. In 8 minutes she returned, entered the box, and I could not see any evidence that she had met the drone. She remained in the box one minute, and in 10 minutes I heard her flying, but she did not enter the box. I waited 5 minutes longer, and she returned with plain evidence that she had met the drone, and in 4 days she was laying, and her bees proved to be well-marked Italians.

When a queen is on the wing she makes a different sound from that of any other bee, so I know I am not mistaken; and as there are no other Italian bees anywhere near me, I believe the queen never left the yard very far. At other times when I have watched queens when released, they would not be gone more than 4 minutes, and would return with evidence of having met the drone, and in due time would be laying. Perhaps the drones go farther from the hive.

Manhattan, Kans. J. L. YOUNG.

Disagreeable Spring

We have had a very disagreeable spring for queen-rearing. The prospect for a good crop of clover honey is good. White clover is just opening up, and there is also lots of sweet clover. All we want now is fine weather. The last 4 days have been cool and rainy, so bees could not get out. The temperature on several occasions within the past few days has been within 3 degrees of freezing. That's pretty cool for this time of year in this locality. However, we are hoping for better things in the future.

Bellevue, Ohio, June 1. H. G. QUIRIN.

Early Season—Reading Bee-Papers

I wintered 12 colonies of bees on the summer stands last winter, and sold 3 colonies in March, leaving 9. On examination today I find 8 out of them storing honey in the supers—2 had the supers two-thirds full, 6 had the supers half full, and one had not begun to fill the super yet, so I think I can say that I have good bees, as this is only May 4—in fact, this is the earliest that I ever found my bees storing honey in the supers in my 30 years' experience with bees.

I have been a reader of the American Bee Journal for several years, and believe it is the best bee-paper for the person who handles bees in a small way that I have ever taken. I believe that every person who handles bees ought to take a bee-paper, even if having only one colony to care for. It will pay well in the end.

WELCH BIBBEE.

Cottageville, W. Va., May 4.

A Beginner's Report

Last spring I purchased my first bees (2 colonies), from which I received about 20 pounds of dark comb honey, and one swarm. The colony from which I took the honey (the one that swarmed) died last winter, and its offspring is very weak. Now, the other wintered well, and is in dandy shape for the clover, which is now coming into bloom. The 2 colonies (1½ colonies in one hive, and ½ colony in the other, making 2) have pulled through the winter on the summer stands without any extra protection. Under the conditions given, would they be more apt to be ½ colony each instead of what they are? The bees gathered a great quantity of honey-dew last year, too.

Bees have not wintered very well around here, but the few the winter has spared will, I believe, pay for their keeping, and then some. Here's hoping so, at least.

I gain much information from the American Bee Journal, and also pleasure in reading its contents.

BENJ. C. SHILLING.

Burkett, Ind., May 18.

[Under the circumstances you are to be congratulated that your bees came through as well as they did.—EDITOR.]

Poor Wintering—Swarm Control

Bees did not winter very well here—too much honey-dew. Out of 32 colonies I have only 21 left, including one that is queenless. One neighbor east of me lost all he had; another one, southwest, lost 9 out of 12, and I believe about this percentage of loss holds good throughout this section. I must add, however, that the most of our bee-keepers through this part of the country are from 25 to 50 years behind the up-to-date methods of bee-keeping.

Clover is looking fine—never saw a finer prospect. Fruit-trees of all kinds are loaded with bloom, and the bees have been having a regular picnic all through the spring and summerlike weather we have had during the past few weeks.

I have been reading Dr. Jones' method of swarm control, and am interested in it. However, I notice that the Doctor's experience has all been with 10-frame hives, while

mine are only 8-frame hives. Does he know of any one having 8-frame hives who has been successful with this method? If so, how many frames in each hive should be treated? A short article from Dr. Jones, in the American Bee Journal, relative to the above would be appreciated by myself, and, no doubt, by others of the readers who use 8-frame hives. E. H. UPSON.
Cromwell, Ind., April 18.

[Dr. Jones is hereby requested to comply with Mr. Upson's request, if he will.—ED.]

The Census of Bee-Keeping

I have noticed in the Report of bee-keeping in Illinois, that there are nearly 55,000 colonies of bees, with a yield of 324,333 pounds of honey per year, and some other years much more in both bees and honey.

The Labor Bureau of Missouri have collected statistics, and give the number of colonies as over 41,000 for this State. I have been almost afraid to give these figures in talking about the bee-industry of Missouri, but I will be more bold after this, since I have seen the statement about Illinois bee-keeping. The figures for Missouri are as follows: Honey 6,015,000 pounds, worth $760,000, which, with the value of beeswax obtained, would make, perhaps, $1,000,000 from the bees per year in Missouri. I do not think they did so well last season, but hope they will do as well, if not better, this season. Prospects are for a good honey-flow in this section, although it continues too cold as yet for bees to work much. White clover is abundant, and commencing to bloom a little, and, as we have had plenty of rain, we are hoping for a good season.

I am disappointed in the taking of the census, as I had hoped to have a correct count on bees, but when the census-taker was at our house, he would not list the bees at all, saying that as I lived in the city, and as I could not report sales of garden and other products raised and sold from my place amounting to $250 or more, his instructions were not to list any. If bees are listed at any place at all, I do not see why they should be left out in other places. If the general census is taken in that way it surely will be unreliable. It would have been a great help to the bee-industry if we could have a correct showing of what it is, and I am sure it can never be taken as easily as it could have been along with the rest of the census. I have seen reports of honey taken by counties, and in this county I have taken nearly as much as was named, and not including any other bee-keeper in the county, so the figures are not nearly what the industry amounts to. J. W. ROUSE.
Mexico, Mo.

Field-Meeting of the New Jersey Bee-Keepers' Association

The New Jersey Bee-Keepers' Association will hold a summer Field-Meeting at Hackettstown, Warren Co., N. J., on Wednesday, June 29, 1910.

The program arrangements are not complete yet, but will include the following:

"Profitable Spring Manipulation in the Production of Extracted Honey," by Harold Hornor.

"Increasing the Sale of Honey by Systematic Advertisting in the Grocery Trade Journals," by F. J. Root, Acting Manager of the American Grocer.

"Suggestions on Foul Brood Inspector's Laws," by John B. Smith, Sc. D., State Entomologist of New Jersey.

"Shall the New Jersey Association join the National Bee-Keepers' Association in a Body?"—a general discussion led by E. G. Carr. A vote will be taken on this proposition.

"Comb Honey," by Ralph Fisher.

All bee-keepers in New Jersey and adjoining States are invited.

Hackettstown is on the D. L. & W. railroad, and can be reached from all points on that line and connecting lines.

Bee-keepers and others are requested to bring along any new or improved appliance relating to apiculture. Bring samples of 1910 crop of comb and extracted honey. Perhaps a premium will be given for the best exhibit.

Programs will be mailed to all our members, and to any others who write the Secretary. ALBERT G. HANN, *Sec.*
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One-frame, Untested Queen	$ 1.75	$11.20
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One " Tested "	2.00	11.70
Two " " "	2.50	14.70
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A. G. Woodman Co., Grand Rapids, Mich.

QUEENS Golden, Red Clover, & 3-Banded QUEENS

Untested, 75 cents each; $4.40 for 6; $8.75 per dozen. Tested, $1.00 each. Queens sent by return mail. 6Atf

DANIEL WURTH, Rt. 1, Wapato, Wash.

§ Caucasians, Carniolans, Banats, Cyprians §

Select untested queens, $1 each; 5 for $4. Imported breeding queens, $5 to $6. Send to original importer and get genuine stock. **FRANK BENTON, Box 17, Washington, D. C.**

QUEENS

AND BEES — an improved, superior strain of Italians is what QUIRIN REARS. All yards winter on summer stands with practically no loss. Our stock is hardy, and will ward off brood diseases.

Last spring we sent fifty nuclei to J. D. Nixon, La Farge, Wis., and on July 20th (same year) he wrote us saying they did just splendid, as at that writing they had already filled their supers, and that he would have to extract them. We have files of testimonials similar to the above.

Prices before July 1	1	6	12
Select queens	$1 00	$ 5 00	$ 9 00
Tested queens	1 50	8 00	15 00
Select tested queens	2 00	10 00	18 00
Breeders	4 00		
Golden 5-band breeders	6 00		
2-comb nuclei, no queen	2 50	14 00	25 00
3-comb nuclei " "	3 50	20 00	35 00
Full colonies on 8 frames	6 00	30 00	

Add the price of whatever grade of Queen is wanted with Nuclei and Colonies. No order too large and none too small. Will keep 500 to 1000 queens on hand ready to mail. Safe delivery and pure mating guaranteed. Over 20 years a breeder. Testimonials and Circular free.

QUIRIN-THE-QUEEN-BREEDER,
BELLEVUE, OHIO.

We have a Car of

! California Extracted Honey !

which we offer at 6¾ cents per pound. Samples on request.

C. C. CLEMONS PROD. CO.
2Atf KANSAS CITY, MO.

Please mention Am. Bee Journal when writing.

M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

◀ ROOT'S GOODS ▶
For Pennsylvania

We carry a full line. Send us your orders and we will give you "A Square Deal."

Best Untested Italian Queens, $1 00.
Best Tested Italian Queens, $1.50.

REA BEE AND HONEY CO.,
REYNOLDSVILLE, PA.

Please mention Am. Bee Journal when writing.

Scoggins' Strain of Bees

A Cross of Cyprian and Italians. I have been breeding this strain of bees for 7 years for honey, and they are the best honey-gatherers in the world. I have tried them all. If you want honey, try one of my Queens—75c to $5.00. 6A3t

J. B. SCOGGINS, Fouke, Miller Co., Ark.

Please mention Am. Bee Journal when writing.

Giant Radish From Japan

"Sa-kura-jima" Grown 10x18 inches. WEIGHT of 42 lbs.

Introduced by U. S. Department of Agriculture and recommended by Wm. J. Bryao. We have all the genuine seeds available.

Trial Packet 10c. May be planted LATE as AUG. 1.

Send 10c stamps or coin at once, before supply is gone and will send free copy of The Fruit-Grower, best garden and fruit magazine. Cash prizes for largest radishes.

The Fruit-Grower, Box 10, St. Joseph, Mo.

Crown Bone Cutter

Hens fed cut green bone lay more eggs. Get a Crown Bone Cutter. Send to-day for catalogue.
Wilson Bros., Box 814, Easton, Pa.

BEST MADE
Lowest in Price

Please mention Am. Bee Journal when writing.

New England Bee-keepers! New Stock at Factory Prices

—:PROMPT DELIVERY:—

Cull & Williams Co.

Providence, - Rhode Island.

Please mention Am. Bee Journal when writing

Italian Bees, Queens and Nuclei

Choice Home-Bred Imported Stock. All Queens reared in Full Colonies.

Prices for July and After

1 Untested Queen....	$0.75
1 Tested "	0.00
1 Select Tested	1.10
1 Breeder Queen	1.65
1-Comb Nucleus (no queen)....	.80

Safe arrival guaranteed.

For price on larger quantities, and description of each grade of Queens- send for Catalog. Send for sample Comb Foundation. 4Atf

J. L. STRONG,

204 E. Logan St., CLARINDA, IOWA.

Golden Italian Red Clover Queens
Gray Carniolan Queens

BRED FROM IMPORTED STOCK

Prices after June 15th

	1	6	12
Untested........	$0.75	$4.00	$ 7.50
Selected........	1.00	5.00	9.00
Tested........	1.25	6.00	12.00
Selected........	1.50	8.00	15.00

Choice Breeders, $3.00 up to $5.00.

Choice Italian Queens mated in my Carniolan apiary—First cross, one for 60c; 12 for $6.50; 25 or more, 50c each.

First Cross.—We have tested these bees and find them to be real hustlers. We have also had many calls for this very desirable bee. We have decided to offer them to the bee-keepers at the low prices above. Carniolans have many good points to recommend them to the bee-keepers, more especially this first cross. The drones are large and powerfully strong flyers, which gives vigor and strength to the bees. They cap the honey white, which most Italians do not. They resist diseases very much more than any other bees, and are quiet, gentle, and easily handled. 5Atf

CHAS. KOEPPEN,

1508 Main St., FREDERICKSBURG, VA.

Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmetsburg, Iowa

Please mention Am. Bee Journal when writing.

Golden and Red-Clover Queens... From Extra-Selected Mothers

Untested, 75c; six for $4.00.
Selected Untested, $1.00; six for $5.00.
Tested, $1.50.

Safe arrival guaranteed. Twenty-one years' experience. Send your orders to

E. A. Simmons, Greenville, [Ala.

Please mention Am. Bee Journal when writing.

IF you need a nice yellow Italian Queen at once, send to **J. L. FAJEN, Alma, Mo.** Untested, only 75c. Tested, $1.25. 3-frame nucleus with Queen, $2.75. Full colony, in 8-frame hive, $5.50. 6A1

Please mention Am. Bee Journal when writing.

Tennessee-Bred Queens!

All from Extra-Select Mothers, Davis' Best, and the Best Queens Money Can Buy

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

	November 1st to July 1st			July 1 to Nov 1				
	1	6	12	1	6	12	Select Breeder -	$4.00
Untested..........	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Nuclei; no queen 1 fr	2.00
Select Untested..	1.25	6.50	12.00	1.00	5.00	9.00	" " " 2 "	3.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00	" " " 3 "	4.00
Select Tested....	2.50	13.50	25.00	2.00	10.00	18 00	Colony, " " 8 "	8 00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,

Dealer in, Importer and Breeder of

ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
Ewell Station on L. & N. R. R.

SPRING HILL, TENN.

Please mention Am. Bee Journal when writing.

HONEY AND BEESWAX

When consigning, buying, or selling, consult

R. A. BURNETT & CO.

199 South Water St. Chicago, Ill

Please mention Am. Bee Journal when writing.

EXTRACTING MADE EASY

by using

MILLER AUTOMATIC DECAPPERS

$5 to $35. Catalog Free.

APICULTURAL MANUFACTURING CO.,
Providence, R. I. 7Atf

Please mention Am. Bee Journal when writing.

MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.
S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
ARIZONA—H. W. Ryder, Phœnix.
MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

Root's Goods in Chicago

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

"Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.
43 N. Brighton Ave., East Orange, N. J.

This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only $1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

LANG, CALIF., Sept. 26, 1909.

Gentlemen:—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of of expense. The cost of gasoline and oil used being only 16¢ per ton of honey extracted. It takes the place of a man at $40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here. Truly,
H. A. SLAYTON.

Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

Our Location and How to Reach It

The A. I. Root Co. 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

Elkhart Buggies

are the best made, best grade and easiest riding buggies on earth for the money.

FOR THIRTY-SEVEN YEARS

we have been selling direct and are **The Largest Manufacturers in the World** selling to the consumer exclusively.

We ship for examination and approval, guaranteeing safe delivery, and also to save you money. If you are not satisfied as to style, quality and price you are nothing out.

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.
Elkhart, - - - - Indiana

Save $30

W. H. Laws

BEEVILLE, TEX.

Is again ready with his Italian Queens. There is no mistake but the Red-clover Italians are the best bees known. Letters coming in nearly every day verify this claim. Just read this one:

DEAR SIR: — The bees from the queens you sent me last spring are breeding finely, gathering honey, and are NOT swarming. If all your reds equal or approach these they are the *best bees in the world*. If you can not fill my order at once that you have bookt I am willing to wait, as I want none but yours. W. LEGETTE, D.D.S.
Taylorsville, N. C.

I have not dared to advertise until the present, nor reduce prices, as I should be swamped with orders. From the time this ad. reaches you I shall be in a position to fill all orders promptly, but always appreciate a few days' notice before orders are to be filled. PRICES — Single Queen, $1; six for $5.00; Breeders, $5.00.

W. H. Laws, Beeville, Bee Co., Tex.

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

American Bee Journal

CAPON TOOLS

CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

Line-Bred Queens!

Line breeding is scientific inbreeding, and it is the only way we can ever expect to reach perfection or have stock that will reproduce itself. As honey-gatherers I will put my strain up against any other strain or race in existence.

Send 10 cts. for sample cage of bees and Booklet which contains information on rearing Long-Lived, Prolific Queens, Improvement of Stock, etc.

Prices of Queens — Untested, $1.00; Select Untested, $1.25. I can furnish either Red Clover or Golden Italian Queens.

My Queens are mated to Select Drones. I guarantee a well-pleased customer.

W. M. PARRISH,
Queen-Breeder,
Lawrence, - Kansas

Please mention Am. Bee Journal when writing.

PRIZE TAKERS

Pharr's Goldens took first prize at 3 exhibits in Texas in 1907. We will furnish Golden, Carniolan, Caucasian, and 3-band Italian Queens, untested, $1.00 till June 1, then 75 cents. Tested, $1.50 till June 1, then $1.00. For large quantities, write. Our 3-band Breeders from W. O. Victor and Grant Anderson strains; other races from the best obtainable. "Prompt service and satisfaction," is our motto. Address. 5Atf

NEW CENTURY QUEEN-REARING CO.
or JOHN W. PHARR,
Berclair, - - Texas

Again to the Front with
The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to furnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens, each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

NORWOOD'S—Texas-Bred—QUEENS

Three-banded Queen-Bees bred for business. Try them, then you'll know. Untested, $1.00; six, $5.00. Write us.
5Atf **E. B. NORWOOD, Del Valle, Tex.**

"If goods are wanted quick, send to Pouder"
ESTABLISHED 1889.

BEE-SUPPLIES

Standard Hives with latest improvements; Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, Veils, and a complete stock of

Root's Standard Goods at Factory Prices

My equipment, my stock of goods, and my shipping facilities, cannot be excelled, and I ship goods to every State in the Union. Illustrated and descriptive catalog mailed free.

Finest White Clover Honey
on hand at all times. **I Buy Beeswax.**

Walter S. Pouder, Indianapolis, Ind. 859 Massachusetts Ave.

Please mention Am. Bee Journal when writing.

HAND-MADE SMOKERS

BINGHAM
CLEAN
BEE SMOKER
Pat'd 1878, '82, '92 & 1903

Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made	$1.50—4	inch stove
Doctor—cheapest made to use	1.10—3½	"
Conqueror—right for most apiaries	1.00—3	"
Large—lasts longer than any other	.90—2½	"
Little Wonder—as its name implies	.65—2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.

Patented, May 20, 1879. BEST ON EARTH.

Please mention Am. Bee Journal when writing.

DOOLITTLE'S
"Scientific
Queen-Rearing"

This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., Chicago, Ill.

LEWIS BEEWARE — Shipped Promptly
——SEND FOR NEW CATALOG——

Extracted Honey for Sale. (Ask for Prices.)

Beeswax Wanted. 28c Cash—31c Trade.

ARND HONEY & BEE-SUPPLY CO. NOT INC.
(Successors to the York Honey & Bee-Supply Co.) H. M. ARND, Proprietor.
148 West Superior St., CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

Established 1885

ALWAYS ON TOP

We carry an up-to-date Line of
Bee-Keepers' Supplies

Prices the lowest in the West. Write us for our 50-page catalog, ready to mail you. Free for the asking. We can fill your orders promptly and satisfactorily. Our old customers know what we handle; to new ones we can say that we have

The Best Make of Supplies

hence there is nothing to fear as to quality.
Send us your rush orders and get your goods before swarming time arrives.
Bees and Queens in their season.
Beeswax taken in exchange for supplies or cash.

John Nebel & Son Supply Co.
High Hill, Montg. Co., Mo.

Please mention Am. Bee Journal when writing.

ITALIAN QUEENS DIRECT FROM ITALY
—Extensive Apiaries—
E. PENNA, BOLOGNA, ITALY.

I send Queens from May 15 to Sept. 30. In Italy we have only Italian bees, so all my Queens are warranted quite pure and rightly mated. One fertile Queen, $1.40; twelve, $12.00; one Breeding Queen, $3.00. Cash with orders. Queens sent postpaid. Safe arrival guaranteed. 5A1

Please mention Am. Bee Journal when writing.

Of Interest

FOR the past 50 years New England bee-keeepers have purchased Bees, Queens, Bee-hives, Supers, Section - boxes, Comb Foundation, Smokers, Honey-jars, and other necessary bee-supplies, of the Reliable and long-established firm of W. W. Cary & Son.

I have recently purchased the above business, and will continue it at the same place as before. I have been associated with the firm for the past eight years, and have had experience in all branches of the business.

I have a fresh supply of the A. I. Root Co.'s goods, which I am able to supply you upon short notice. Send in your orders early and I will give them my best attention. 4A6t

Send for Bee-Supply Catalog.

EARL M. NICHOLS,
(Successor to W. W. Cary & Son)
Lyonsville, Massachusetts

Please mention Am. Bee Journal when writing.

Write Us To-Day
for our 1910 Catalog and let us tell you all about
DITTMER'S
COMB FOUNDATION
and
WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line** of **Supplies.** It will pay you, and costs nothing.

RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

BARNES' Foot-Power Machinery

Read what J. I. Parent, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter. 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

Latest Improved Hives & Supplies. Disc'nt on early orders. Catalog free. Send 25 cts. for 90-page Bee-Book for beginners.

J. W. ROUSE,
3Atf MEXICO, MO.

"Established in 1878"
The Oldest, the Largest and Best Equipped Queen-Breeding Apiaries in the North.
Every Queen Guaranteed Pure Mated.
Italian and Caucasian. Circular Free.
A. D. D. WOOD, Box 61, Lansing, Mich.

Please mention Am. Bee Journal when writing.

CRANE CELLULAR CASES

Mr. H. W. Coley, of Westport, Conn., writes us:

"I am using your Corrugated Paper Cases for shipping comb honey in, this year, and like them. On one shipment last year of six wooden cases packed in a carrier with a straw cushion, the greater part were ruined. This year the same quantity shipped to the same place in your cases went through without a broken comb."

1. **The first cost of the Paper Cases is less.**
2. **He saved the cost of the carriers.**
3. **He saved the time of making the carriers.**
4. **He saved the weight of the carriers.**
5. **The Paper Cases weigh less than wooden ones.**
6. **They can be assembled in one-half the time it requires to set up a wooden case.**

Send for our Circulars and let us tell you what some of the other large producers and dealers say.

Do not take our word for the value of this new Case.

Plan to order early. Some were disappointed last year.

J. E. Crane & Son, Middlebury, Vt.

Honey and Beeswax

CHICAGO, May 27.—The stock of fancy comb honey is about exhausted. When sales are made of it, it continues to bring 17@18c. The other grades are from 1@5c lower. Beeswax continues to be in good demand at 32c for clean yellow. Extracted, white, 7@8c; amber 6@7c, according to quality and flavor.
R. A. BURNETT & CO.

CINCINNATI, May 27.—The market on comb honey is bare. The market on extracted honey is brisk, white sage, in 60-pound cans, two to a case, bringing 8½c; amber, in barrels, 6½@6¾c. The demand for beeswax is only fair at $33 per 100 pounds. These are our selling prices, not what we are paying.
C. H. W. WEBER & CO.

INDIANAPOLIS, May 27.—There is a good demand for best grades of honey, but none is now being offered by producers. Dealers are fairly well supplied with one grade of comb, which is fancy white, mostly from Michigan, and 18c is the price asked. Finest white clover extracted is being sold by dealers in cases of two 60-pound cans at 10c per pound. Producers of beeswax are receiving 30c cash, or 32c in exchange for goods.
WALTER S. POUDER.

NEW YORK, May 27.—Stocks of choice white comb honey well cleaned up, with a fair demand. New crop is now beginning to arrive from the South, and finds ready sale at 13@15c, according to quality. Dark honey and off grades are not in demand. The demand for extracted is fair. Quite a little stock on hand of California last year's stock, but judging from the reports we are receiving from the Coast, this year's crop will be very short, and consequently what is held over is held at firm prices. West Indies honey is arriving regularly, and finds ready sale. New crop from the South just about beginning to come in. We quote: California white sage, 9@10c; light amber, 8c; amber, 6½@7c. Southern, average quality, 70@75c per gallon; fancy, 6½@7½c a pound. Beeswax steady at 30@31c. HILDRETH & SEGELKEN.

BOSTON, May 23.—Fancy white comb honey at 16@17c; No. 1, 15@16c. White, extracted, 8@9c; light amber, 7@8c; amber, 6@7c. Beeswax, 30@32c. BLAKE, LEE CO.

ZANESVILLE, OHIO, May 31.—There is about a normal demand for honey, with market rather bare. At this season of the year but little is offered. Best grades of white clover comb, which is what the trade here demands, should bring first-hand 14½@15½c, with wholesale prices about as last quoted. Producers should receive for beeswax 27@28c cash, 30@32c in trade, according to quality.
EDMUND W. PEIRCE.

KANSAS CITY, MO., May 27.—There is no comb honey on this market now, and has been none for some time; the demand is good, and we think No. 1 white comb in 24-section cases would sell at $3.50 to $3.75 per case. Demand and receipts on extracted are both fair, and we quote white at 6¾@7c per pound. Beeswax at 25@28c.
C. C. CLEMONS PRODUCE CO.

HURT-CAIN CO., Inc., Receivers and Shippers of Comb and Extracted Honey. Refiners of Beeswax.
Consignments Solicited.
We make a specialty of SOUTHERN HONEY.
5A3t **37 Vance Ave., Memphis, Tenn.**

Cook's Honey-Jar.
With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by
J. H. M. Cook, 70 Cortlandt St., N. Y. City.
Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.
☞ The oldest Bee-Supply Store in the East. 2Atf

FALCON FOUNDATION
Years of experience in the manufacture of
FALCON COMB FOUNDATION
have made it PERFECT.
Bees like it, and the foremost
Honey-Producers Use It.
It helps materially to increase the
Honey Crop
(Send for our new Catalog.)
Ship us your
BEESWAX
to FALCONER, N. Y.
Will send shipping-tags, when you write asking for quotations.
We pay highest market prices.
W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

SUPERIOR BEE-SUPPLIES
Specially made for Western bee-keepers by G. B. Lewis Co. Sold by
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DENVER, COLO.

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No. 7.

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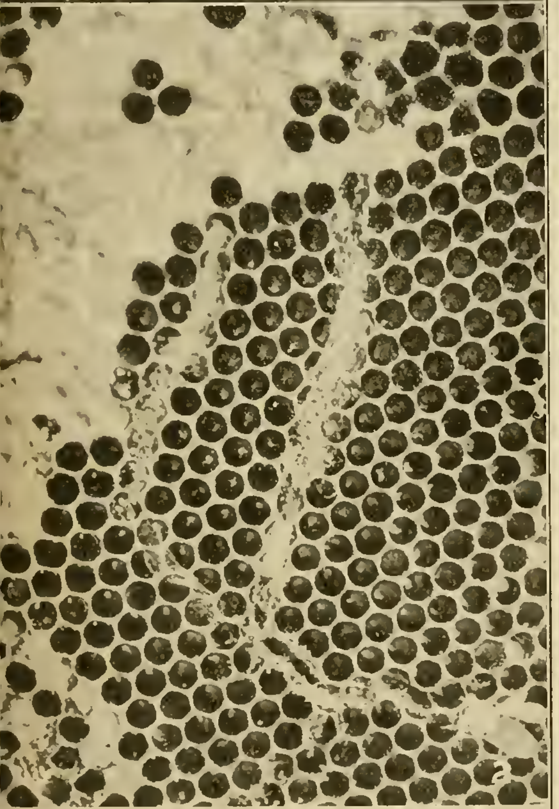

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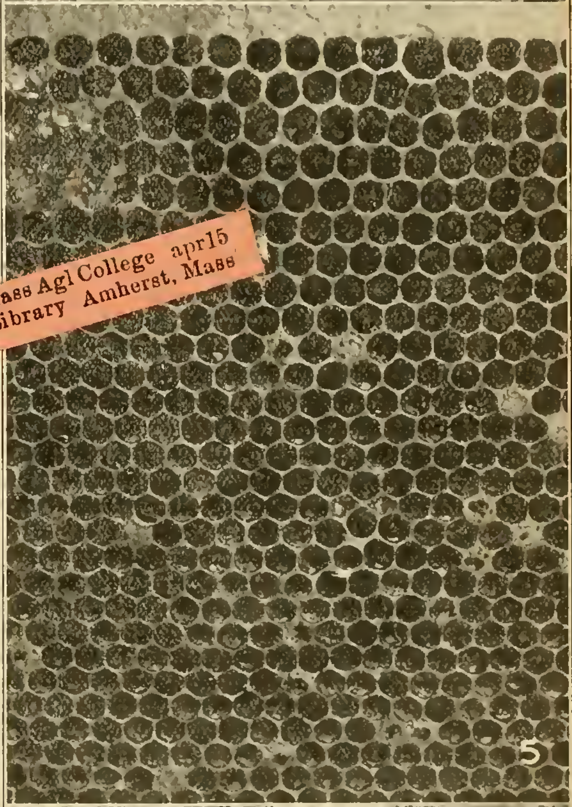

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JULY
1910

THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY

GEORGE W. YORK & COMPANY

146 W. Superior Street, Chicago, Ill.

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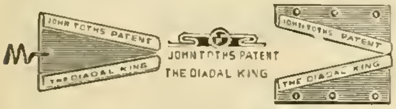

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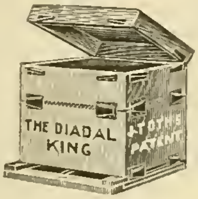

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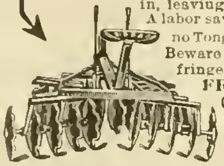

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Published Monthly at $1.00 a Year, by George W. York & Company, 146 West Superior Street,

GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., JULY, 1910

Vol. L---No. 7

Editorial Notes and Comments

Names of Bee-Diseases

When foul brood is spoken of, it is uncertain which of two different diseases is meant, and there is constant danger of confusion. To prevent confusion, the full name must be used each time, "American foul brood" or European foul brood," as the case may be. But the constant tendency is to shorten by leaving off the first part of so long a name, simply saying "foul brood," and then there is trouble.

If we use the old name "black brood" instead of "European foul brood," there is less danger of confusion. But the blackness of the brood is not what distinguishes the disease. The other disease has just as black brood. The color of the brood, however, is a prominent characteristic, and when one is looking through a colony to see signs of the disease, the one thing he specially looks for is the color of the larva, as it lies coiled up in the bottom of its cell, is seen to be yellowish or yellow, the scourge is present. As yellow brood is the thing looked for, no more appropriate name could be given the disease than "yellow brood." Then if the name "foul brood" be used for the other disease there ought to be little chance for confusion. Is there any objection to the names "yellow brood" and "foul brood" for the two diseases?

One Super and Frequent Extracting

The practice of leaving extracting-supers on till the close of the season and then extracting all at one time seems to be on the increase, and there are good arguments in its favor. Circumstances alter cases, and G. C. Greiner gives reasons in Gleanings for going to the other extreme. Instead of piling up supers as they are filled, he gives only one super to each colony, using Jumbo frames of the same size in both super and brood-chamber; and instead of waiting till the close of the season to extract, he begins to extract as soon as the first frames are three-fourths sealed. He gives several reasons for this, a chief one being that his customers want the honey as soon as the first of it is ready to extract, and he would lose trade if he were not ready to cater to it. Another reason is that, not being very strong physically, he handles only one frame at a time, never doing a very heavy day's work in any one day, but going over his apiary in order, taking part of it at each extracting, and in the rush of the season extracting daily, doing the work in the warm part of the day.

His management during the first part of the season is interesting. He says:

> As soon as the season is far enough advanced to show signs of incoming honey, all better swarms are supplied with their supers. This generally takes place during fruit-bloom, about the 20th or 25th of May. When the white-clover flow begins, or a little before, all the rest that promise fairly well are also supplied to make sure that all have room for storage. As the flow advances, and the strong and best-working colonies are filling up, I take from 2 to 4 of their heaviest combs and exchange for empty ones from the weaker colonies that have not started yet. The bees that adhere to these full combs I try to shake in front of their hives; but I am not very particular if a few bees are left on the combs.
>
> Two or three days after the first exchange was made, the inserted combs in those strong colonies are probably full again, and need exchanging the second time. When this is done, all the bees are left on the combs taken from colonies that are overly strong, and exchanged for empty ones of the weakest colonies. In this way I hit two birds with one stone—I control swarming with one lot and build up another to proper working condition.

Then he begins extracting, as already mentioned.

Sealed Honey vs. Feeders

The writer is the inventor of one of the most popular feeders in use, but if he could always have things to his liking he would never use a feeder. Frames of sealed honey have the preference, every time. Nor is the writer lacking in good company. Editor Hutchinson says: "If I always had an abundance of sealed stores, I would *never use feeders.*"

"But," says one, "feeding syrup is important for stimulation." To this Mr. Hutchinson replies:

> "I suppose that the regular feeding of a syrup is more stimulating than the presence of sealed stores in the hive, but I doubt if it is much greater than would be the uncapping of some of the sealed stores already in the hive."

Is it any greater? Is it as great? The uncapping will certainly make the bees handle some of the honey. Could there be any possible advantage in getting them to take the same amount of honey from a feeder? The only question is whether there is anything more stimulating in sugar syrup than there is in honey? It is not very hard to believe that honey is the more stimulating of the two, for it contains elements that are not in sugar.

So far, then, as the matter of stimulation is concerned, it is not hard to believe that uncapping sealed honey is better than feeding sugar syrup. Please understand, however, that this is not saying that either is necessary or advisable at all times, or indeed often. If the hive contains abundance of stores, and the bees have all the brood they can cover, what can possibly be gained by anything further in the way of stimulation? Only in times and places where there is so long a dearth that there is danger that laying may cease altogether, or that the bees will not care for the eggs that are laid, does it seem that stimulation of any kind can do much good.

But there is another item of serious importance to be considered in comparing sealed stores and sugar syrup. Excellent authorities tell us that young bees reared upon sugar syrup have not the stamina that comes from honey. In Switzerland—and you may go a long way before you will find safer guides than Swiss bee-keepers—they say, practically, "Feed sugar, if you must, for winter stores, but only for winter stores. When it comes time to rear young bees in spring, honey must be on hand if you do not want degenerated bees."

"But why speak of these matters now? One will hardly think of stimulative feeding before next spring." Next spring will be too late. If frames of sealed honey are to be on hand next spring, they must be gotten ready this summer. The matter is considered of such serious importance that it was thought worth while to urge it once more, in the hope that some who otherwise would not give it sufficient thought might be induced to secure a sufficient stock of sealed combs to be ready for any emergency next year.

Why Bees Fear Smoke

It is common knowledge that bees are frightened when smoke is blown upon them; but not every bee-keeper has stopped to inquire why. Some have said that when the bees smell smoke they suppose their home is in danger of being burned down. But how should they have learned to connect smoke with fire; or, indeed, why should they fear fire? In the introduction to the book, "How to Keep Bees for Profit," it is thus explained:

In former times "the bees were hunted in their native habitat in the clefts of the rocks, in the heart of the trees of the forest, and such other places where they are accustomed to build their combs. In securing their golden stores the hunters were compelled to smoke and destroy the bees, thus creating in them a fear of smoke that has been inbred for centuries."

This makes the matter simpler, for it leaves fire out of the question altogether; century after century, when they have smelled smoke they have learned to associate it with the destruction of the colony. Why not?

But when we come to inquire just how the fear is inbred, how the fear in a colony that has been destroyed to the accompaniment of smoke is conveyed to its posterity, the whole fabric falls down. For none of the colonies destroyed ever had any posterity! Couldn't have. At least it could have no postertiy proceeding from it after its destruction. And none other could count.

Evidently we have not yet the true answer to the conundrum. Perhaps we never shall have. Fortunately it does not so greatly matter.

Bees that Best Resist Foul Brood

In America and in Australia it is the prevailing belief that Italians are less subject to foul brood than blacks. In England and in Switzerland the opposite view is held. Commenting upon foul brood in Switzerland, the British Bee Journal says:

> The fact that in Southern Switzerland, just where the Italian bee is indigenous, foul brood is most extensively found throws a peculiar light on the statement in American papers, and that of some of the German ones, that bees of the Italian race are less subject to foul brood. The statistics have shown just the reverse. It is in the canton Tessin, where the Italian bee is exclusively cultivated, and whence queens are largely exported, that the highest percentage of cases was found, namely, 16 percent.

The argument is hardly to the point. The fact that foul brood prevails where Italians are exclusively cultivated proves that Italians are not immune to foul brood—a thing which perhaps no one claims. The question is: If blacks were kept in the same region, would more or less than 16 percent of them be affected with foul brood?

If an American bee-keeper, holding the belief that Italians are better honey-gatherers than blacks and less subject to foul brood, were to keep bees in Switzerland for a year, he would likely change his mind. Likewise a Swiss bee-keeper, after a year in this country, would likely undergo a change of mind. The fact is, there are blacks and blacks. Also there are Italians and Italians. Granted the variation in the two different kinds, it is easy to believe that some blacks are better than some Italians, and that some Italians are better than some blacks.

The American bee-keeper is very sure Italians are better than blacks. He has tried the two side by side, and he knows. But is he sure that the blacks in England and in Switzerland are just as poor as the blacks he has kept? Is it not possible that the blacks of this country are a specially poor lot? Is it not worth trying to find whether the best blacks of Switzerland are better or worse than the Italians in this country? Possibly Swiss blacks are not adapted to our climate. And just possibly they are.

Returning to our original question, it will probably be found that the most vigorous bees are the least subject to foul brood, whether they be blacks, Italians, or hybrids.

Eight Frames vs. 12 Frames

R. F. Holtermann and the Canadian Bee Journal are not agreed as to the size of hives. Mr. Holtermann says that "a large hive (a 12-frame Langstroth) is much better than an 8-frame." Editor Hurley says:

> "We do not hesitate to take issue with Mr. Holtermann in this statement. The 12-frame is too large to winter in; it is too large for spring; it is too large for fall. There is, in our opinion, to much 'barn' room for the bees to keep at the necessary temperature."

There is just a possibility that Mr. Holtermann might say: "To be sure, a 12-frame is too large; but better have a hive too 'barny' than too small." Possible, but not probable; and not at all probable that he will agree with Mr. Hurley when the latter says: "We would not recommend anything larger than 9 or 10 frames."

Possibly the friction between these two Kanuck leaders may throw a spark of light on this vexed question.

Restlessness of Queens in Winter

Under the title of "The Long Night in the Hive," Tickner Edwardes has written an article for the Pall Mall Gazette, in which he takes the ground that bees would remain dormant, or nearly so, consuming practically no stores, if it were not for the fact that the queen keeps them constantly stirred up. Among other things he says:

> "Prolonged study of hive-life in winter will reveal one hitherto unsuspected fact. At this time, far from settling down into a life of sleepy inactivity, the queen-bee seems to develop a restlessness and impatience not to be observed in her at any other season. It is clear that the workers would lie quiet enough if they had only themselves to consider. But the queen will not allow it. Night or day, she seems always in this unresting state of mind, and the work of getting their queen through the winter season is evidently a continual source of worry to the members of the colony. Altogether the most logical inference to be drawn from any prolonged and careful investigation of hive-life in winter is that the queen-bee herself is the main obstacle to any system of hibernation being adopted in the hive.
>
> "In some future age the mother-bee may be ruthlessly slaughtered at the end of each season, another queen being reared when breeding time again comes around. Then, no doubt, honey-bees would hibernate, as do so many other creatures of the wilds; and the necessity for all that frantic labor throughout the summer days be obviated.
>
> "The germ of life in all eggs is notoriously hardy; and it is conceivable that by a system of cold storage, as carefully studied and ingeniously regulated as are most other affairs of the hive, the bees might succeed in preserving eggs throughout the winter in a state of suspended, but not irresuscitable, life. And if ever the honey-bee, in some future age, discovers this possibility, she will infallibly become a true hibernating insect, and join the ranks of the summer loiterers and merry-makers. But the bee-master will get no more honey."

All this sounds rather wild, and the last part of it, at least, lies entirely in the realm of fanciful conjecture, but the fact that the dignified British Bee Journal has seen fit to devote nearly two pages to copying the article without note or comment makes one wonder just how much ground there is for the assertion that prolonged study will reveal the hitherto unsuspected *fact* that in winter the queen seems to develop more restlessness than in summer. Certainly she does not seem a great idler in summer. Has our much esteemed contemporary enough faith in Mr. Edwardes to take his word for it, that the queen is such a troubler in winter, without so much as saying, "How do you know?"

According to Mr. Edwardes, if the queen were absent the colony would be so quiet that little or no stores would be consumed in winter. But are not queenless colonies the very ones that are notoriously uneasy and consume most in winter?

"Bee-Keepers' Guide"

This book on bees is also known as the "Manual of the Apiary." It is instructive, interesting, and both practical and scientific. On the anatomy and physiology of the bee it is more complete than any other standard American bee-book. Also the part on honey-producing plants is exceptionally fine. Every bee-keeper should have it in his library. It has 544 pages, and 295 illustrations. Bound in cloth. Price, postpaid, $1.20; or with a year's subscription to the American Bee Journal—both for $1.90. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

"Scientific Queen-Rearing"

No other book compares with this one written by Mr. G. M. Doolittle. He is an expert in the business. It tells just how the very best queens can be reared. Bound in cloth. By mail, $1.00; or with the American Bee Journal, one year—both for $1.60. In leatherette binding, 75 cents, postpaid; or with the American Bee Journal one year—both for $1.25. Send to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Miscellaneous News-Items

Heartsease at Marengo

On page 191, C. P. Dadant quotes me as saying that in 1902, for the first time in my observation, heartsease was busily worked on by the bees, and says, "This is certainly not a very good recommendation." A little explanation will show that I meant nothing to the discredit of heartsease as a honey-plant. It was not that heartsease had been plenty for years and had yielded nothing, but I think that previously the plant had been so scarce here that it was not worth considering as a honey-plant. I think it is on the increase, and now of considerable importance, especially as I think the honey from it is very light in color. C. C. M.

A Call from Dr. Phillips

Dr. E. F. Phillips, in charge of Apiculture, Bureau of Entmology, Department of Agriculture, Washington, D. C., called at the office of the American Bee Journal early last month. He was on a tour in the interest of foul brood. The Government is taking hold of the diseases of bees in a systematic, thorough manner that should yield good results in time. It is a tremendous undertaking, to cover the whole of the United States, but when accomplished it should be productive of much good to the whole bee-keeping industry.

Dr. Phillips, with his assistants, is doing things for bee-keeping, and if all interested will co-operate, the work being done, and in process, will yield large returns.

Honey Prospects and Bee-Supply Trade

About the middle of June we sent several questions to some of the leading bee-supply dealers, asking as to the honey prospects for 1910, and also concerning the demand for bee-supplies. Some of them did not respond, but the following have been heard from:

The C. M. Scott Co.

The bee-business is on the boom. Everything goes out at once. Everybody, it seems, has waited until the last minute, and now they can not get the goods fast enough. The prospect for honey has never been better for many a day. There are fields of white clover in bloom that remind one of snow in the summertime, as it is practically white. If the weather continues as nice as it is now, we will certainly have a better honey crop.

THE C. M. SCOTT CO.
per E. A. Dittrich.
Indianapolis, Ind., June 17.

Dadant & Sons

EDITOR AMERICAN BEE JOURNAL—
Dear Sir:—Owing to the cool weather in May and the early part of June, the bee-supply business has been very slow locally. Wholesale dealers and jobbers have been stocking up heavily, owing to the good prospect for white clover.

The crop started here June 11th, and since that time bees have been storing honey rapidly. With enough rain there should be a good clover crop, and it should run pretty well into July. There is plenty of clover, and it is blooming profusely.

Truly yours, DADANT & SONS.
Hamilton, Ill., June 17.

Walter S. Pouder

Indiana bee-keepers are rejoicing because we are in the midst of one of the best white clover flows that we have ever known. Old and experienced bee-keepers express surprise at the way honey is coming in. Weather conditions seem to be exactly right—very warm—and comb-building seems easy for the bees. The weather in May was not favorable, but bee-keepers have not been discouraged at any time. Many winter losses have been reported, but the owners have profited by their experience in many cases, and are building up again with better material. We can not tell how long this flow will last, but with favorable weather it should extend into July. Much nectar is going to waste in some localities because there are not enough bees to take care of the bloom.

WALTER S. POUDER.
Indianapolis, Ind., June 23.

Minnesota Bee-Supply Co.

EDITOR AMERICAN BEE JOURNAL—
Dear Sir:—Bees in this locality wintered very well, and up to the end of April were in fine condition—better than we have ever known them to be any year before. After that it turned cold for over 6 weeks, which set them back a little, but apparently did not do much harm. White clover came out fine about 10 days ago, but as we have not had any rain here for over a month, everything is dried up, and the bees are not getting any honey at all just now. Basswood is budding out pretty well, and it is possible that we will get a crop of basswood honey.

The bee-supply business has been very slack all spring, and is now almost at a stand-still. We have a large stock on hand, and are filling orders just as fast as they come in. Yours very truly,

MINNESOTA BEE-SUPPLY CO.
Minneapolis, Minn., June 22.

G. B. Lewis Company

EDITOR AMERICAN BEE JOURNAL—
Dear Sir:—Replying to yours of June 15th, referring to the bee-supply business and trade in general, we will say that the Colorado trade has been very good, and we understand the prospects for honey are very favorable.

We are just in receipt of a report from Iowa, from which we quote as follows: "The prospects for honey are good. Winter loss is the cause of poor trade."

Another one from Illinois as follows: "Weather has finally turned warm, and bees are beginning to get busy."

Another one from Michigan, as follows: "We are having bee-weather now; oceans of honey, but very few bees in the hive to gather it. Very few bees in the country are working in the supers when they should be at it full blast. As a result, no swarms, sections are not being filled up, and no demand for goods. This was all caused by the cold and bad weather during April and May, when there were weeks at a time when the bees could not leave the hives. When the honey-flow opened up a few days ago, bees were in a weaker condition, not nearly as strong as they were April 1st. During the bad weather the queen quit laying, so they are short of workers now when the harvest is on." Very truly,

GEO. C. LEWIS.
Watertown, Wis., June 17.

A. G. Woodman Co.

EDITOR AMERICAN BEE JOURNAL—
Dear Sir:—In reply to your favor of recent date, relative to the honey crop, I will say that perhaps the following letter, just received from Mr. S. D. Chapman, of Mancelona, Mich., one of Michigan's best and most extensive honey-producers, will explain matters best:

Mr. Woodman:—I guess it is time to order a few cans. You may send me 100 cases. This is the most singular season I ever saw. Bees wintered splendidly, and built up very early in the spring. I had more than 50 colonies start queen-cells the last of March, but early in April it turned cold, and for about 60 days the bees hardly had a flight. Raspberry and all the fruit-buds were frozen, no pollen came in during all this time; the bees got out of honey, and I let 14 of the best I had starve to death. I was right after them all the time. I fed 2500 pounds. No brood-rearing was going on until June 8th. Now my bees are growing lighter every day, but in a week the first young bees will begin to come on. Ninety-five percent of all the raspberry was frozen; all that escaped has been in bloom two weeks, and all that froze will come on all right; it will be in bloom in 5 or 6 days. The bees are more than making a living now. Basswood is budding full; willow herb is plentiful, and the prospects are good for honey; but we will have few bees to gather on raspberry.

S. D. CHAPMAN.
Mancelona, Mich., June 20.

Our trade was excellent up to about May 20, at which time it dropped off considerably on account of bad weather conditions; but things are now booming again. The above letter explains conditions exactly as they existed over the entire State of Michigan, and undoubtedly other parts of the country. There is now a most excellent honey-flow—oceans of it to be gathered; what few bees were in a condition to gather when it opened up are securing a fine harvest. Conditions are now as favorable as they were discouraging during May. A fair crop is assured, and with rains to prolong the flow, a good crop should yet be secured this season.

Yours truly, A. G. WOODMAN CO.

P. S.—Michigan is a solid mat of clover. An engineer that runs between Grand Rapids and Detroit, says that the air is heavy with clover fragrance at night, and he never before saw so much of it. A. G. W.

Bees—Farmers' Bulletin No. 397

This is a new publication issued by the Department of Agriculture at Washington, D. C. Its aim is to give briefly the information needed by persons engaged in the keeping of bees, and to answer inquiries that are frequently received from correspondents of the Department. It discusses the location, equipment, and stocking of the apiary, the habits of bees and their manipulation, the production of honey and wax, wintering, and diseases and injuries. It also gives such general information as how to obtain and introduce queens, laws affecting bee-keeping, and journals and books on the subject. This publication can be obtained free as long as the supply lasts, by applying to the Secretary of Agriculture, Washington, D. C.; it may also be secured from Senators, Representatives, and Delegates in Congress; and the Superintendent of Documents will sell it at 5 cents per copy.

"Der Bien Und Seine Zucht"

This is the name of a text-book on bee-culture that has been received at this office. It is written by Rev. F. Gerstung, editor of the German bee-paper, Die Deutsche Bienenzucht. The work contains nearly 500 well-printed pages, with 230 illustrations, many of them full-page. A little more than 100 of these are representations of apiaries, mostly house-apiaries, or pavilions, as they are called in Germany, for an apiary with the hives separately placed out in the open is as rare in Germany as a house-apiary in this country. The author says:

> "We are convinced that Americans, also, will introduce our wonderfully beautiful pavilions as soon as they learn their practical advantages over having hives placed singly."

He perhaps does not know that house-apiaries were more in vogue in this country 40 years ago than at present.

Very admirable are the 32 illustrations of brood-combs.

Much space is given to developing the author's idea that a colony of bees is an organism.

A very full list of honey-plants is given, occupying 20 pages.

It is generally believed that propolis is gathered from the buds of trees, but the author raises the question whether it may not also, like wax, be a secretion of the bee.

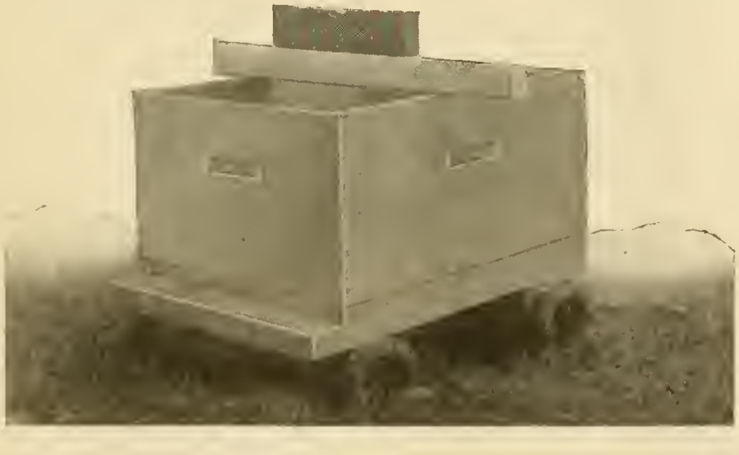
The only size of frame favored is that used in the Gerstung hive, which the author calls the "rational" size, as being best adapted to the needs of the bee. It measures 40x25 centimeters (about 15¾x9⅞ inches), not outside, as frames are measured in this country, but inside measure. It will be seen that a Langstroth frame contains about .89 of the area of a Gerstung frame (not .99, as given in the book—a manifest error). But this frame may be used either as a deep or a shallow frame. The more common way seems to be to use it as a deep frame, 40 centimeters in depth, with the warm arrangement; that is, with the frame running parallel with the entrance. When the frame is used with 25 centimeters as the depth, the cold arrangement is used, the same as frames are generally used in this country.

Those who are familiar with the German language will find it quite interesting to note some of the differences between the teachings of this work and those of the English text-books.

An Inexpensive Hive-Stand

In the very neat report of the second annual meeting of the Maryland Bee-Keepers' Association will be found an address by Dr. Burton N. Gates, in which he demonstrated the inexpensive and substantial bee-hive stand in use in the United States Government apiary, College Park, Md., as follows:

> The stand consists of two glazed, vitrified tiles 4.25x4.25 inches and 18 inches long. The corners of the otherwise square tile are clipped, thus making it approximately octagonal in cross-section. In the trade these tiles are known as "18-inch, one-way conduit tile," and are used for conducting electric wires below the ground. Being so generally used throughout the United States, they are obtainable from electric light and telephone companies in practically every city, or they may be obtained from terra-cotta factories. Weighing about 15 pounds each, they are just heavy enough to stay readily in position. Being hard burnt and vitrified, they are practically impervious to water, and to a high degree they resist the action of weather and frost.



Two Octagonal Tiles Used for a Hive-Stand.

The hive rests upon one tile at the back end, and one at the front end. The tiles cost about 5 cents each. Seconds or culls cost less than No. 1 tile, and answer as well. A tile slightly warped or chipped is all right, but if it is cracked it will not last.

Maryland Agricultural College Apiary, at College Park, Md.

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A Call On Dr. C. C. Miller

Saturday, June 18, was a perfect summer day. The ride from Chicago to Marengo, Ill., was so refreshing, as the electric cars sped along fields of white clover whose delectable fragrance was wafted through the open car windows.

We arrived at the hillcrest home of Dr. Miller, often called "the sage of Marengo," about 11:30 a.m. He was well, and as happy and optimistic as ever. He has 110 colonies of bees, and they were piling in the white clover nectar "to beat the band," as the boy on the street would say. Up to June 8 the bees were starving, but immediately after that day there was a complete change, and by June 18, on some hives, there were over two comb honey supers.

Dr. Miller's 79th birthday anniversary occurred June 10, when there was a gathering of the clans, at his delightful home, and a thoroughly enjoyable time was had by all present.

Miss Emma Wilson, who conducts Our Bee-Keeping Sisters' department in the American Bee Journal, still works with the bees as much as, if not more than, ever. As most of our readers know, Miss Wilson is the sister of Mrs. Miller. Then there is Grandma Wilson, 91 years old, mother of Mrs. Miller and Miss Wilson, which completes the family circle at Dr. Miller's.

We have said it before, and expect to say it often, as it will bear repeating, that to spend a few hours with Dr. Miller and his family, in their plain, quiet, dignified, restful home, is a privilege and pleasure that any one may well covet. We look both forward and backward to our visits there with a satisfaction and a delight that are ever increasing as the mind dwells upon them.

It has been our hope, expressed many times, and in which we know all bee-keepers unite, that Dr. Miller may be spared yet many years to bless the world with his cheering presence and mellifluous contributions to the living literature of beedom. It is nice to know that his last years are indeed his best, and that he has the abiding love and confidence of an admiring host, not only of bee-keepers, but of others in the varied walks of life who are so fortunate as to know him personally or by reputation.

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The Two Kinds of Honey-Dew

At a conversazoine of the British Bee-Keepers' Association, as reported in the British Bee Journal, an interesting discussion regarding honey-dew took place. Some held that honey-dew was the excretion of plant-lice, and some that it was a secretion directly from the plants.

"Mr. Cowan, in summing up the discussion, said that both sides were right, because there was honey-dew produced by plant-lice and honey-dew produced by exudation of the leaves. You will always find a strong flow of honey-dew after hot and dry days, followed by cold and damp nights. If the night is dry, you do not get honey-dew; if it is a damp night, you are sure to have honey-dew. There are two causes which produce honey-dew. First, insects, which attack the leaves, and digest only part of the liquid they suck up, discharging the greater part in sticky drops, which we all know. Then, in the absence of insects, there was the exudation of the leaves. The exudation forms in small drops on the underside of the leaves, and drops from one leaf to another.

"The two honey-dews differed in many respects, that produced by the leaves being formed at night—just the reverse to the other; that produced by insects being formed during the day, and the hotter the weather the more of it was produced, the greatest production being in the middle of the day; that was because the aphides were feeding during the day. During the night they do not feed on the leaves, so that the production ceases. On the other hand, the leaves exude honey-dew during the night, when the atmosphere is moist. There was also a distinction in their composition. We all know that flower nectar is composed of saccharose and glucose, but the composition of honey-dew produced by insects contains a large quantity of dextrine, gums, and other sugars, such as mannite. Mannite is abundant in the ash, and is found in white scales on the leaves.

"Now, the honey-dew that is produced by the exudation of the leaves is identical with the nectar that is collected from the flowers. We know that the polariscope helps us very much in discovering these things. All flower-honey polarizes to the left, and honey-dew, on the other hand, polarizes to the right, like glucose, and it was supposed at one time that all honey that did not polarize to the left was adulterated. It is now known that some of this honey that polarizes to the right is not adulterated at all, but is due to honey-dew. There is another important matter. The exudation of the leaves also polarizes to the right, and we have to find out how to differentiate the one from the other, and devise a method of diagnosing it.

"He had demonstrated some years ago that insect honey-dew polarized to the right; but as the honey-dew produced by the exudation of the leaves polarized to the right also, after dialyzing it for 24 hours, according to Dr. Haenle's method, it would go back to zero, whereas the other would not do so. It therefore showed that there was a difference between the insect honey-dew and the exudation of the leaves. This was a very important point to bear in mind."

Our Front-Page Pictures

Brief descriptions of the pictures on the front page this month are as follows:

No. 1.—Apiary of I. D. Nixon

I am sending a picture of my bee-yard taken last year. The person to the right is myself. I took about 60 pounds of clover honey per colony last year. The hives at the right contained 50 2-frame nuclei which I got from Ohio. They were put in the yard May 27, 1909; I built them up with plenty of honey to winter on, and extracted 2300 pounds of honey from them during the season.

I have at present 103 colonies. This has been a very hard spring on bees. It was so cold, and the frost killed all the bloom. White clover will bloom about June 1.

Lafarge, Wis., May 11. I. D. Nixon.

No. 2.—Larva of the Greater Bee-Moth

Galleria Mellonella.

This picture is taken from the Second Annual Report of the Indiana State Entomologist. George S. Demuth, the Indiana Bee-Inspector, says this about it:

The eggs of this bee-moth are usually pushed into the crevices between boards or under hives or about the entrance. The caterpillars are of a dirty gray color, with brown heads. They seek the comb during the feeding period, and tunnel through it. To better protect themselves from the bees they line this tunnel with a silken tube which they have power to spin. In 3 or 4 weeks they are full grown, being about an inch in length. They now spin their cocoons and in about 2 weeks appear as moths. The moths have a protective coloring mimicking that of old boards, and are thus not readily observed.

No. 3.—Apiary of Jesse Jones

This picture represents the home apiary of Jesse Jones and his three daughters, located at Parma, Mo.

No. 4.—A Japanese Apiary

This is a picture of the Nonogaki Apiary, a queen-breeding yard at Okucho, Owari, Japan. We had hoped to have a description of it, but failed to get it. There is much in it that indicates up-to-dateness.

No. 5.—Advanced Stage of American Foul Brood

Another picture from the Second Annual Report of the Indiana State Entomologist. Mr. Demuth says this of American Foul Brood:

The American Foul Brood is that which has been known simply as Foul Brood. From investigations conducted by the Bureau of Entomology of the United States Government, the cause of American Foul Brood was found to be a species of bacteria, Bacillus Larvæ.

In diseased colonies the bees are usually not very active. Much of the brood fails to hatch. The cappings of the cells are usually sunken and discolored, and often have ragged perforations. In American Foul Brood most of the cells containing diseased larvæ are or have been capped and the larvæ seem to die soon after the time of capping. If one of these diseased cells be opened the larvæ may be seen lying on the lower side not bottom) of the cell. Later it sinks down into a jelly-like mass of brownish color. The odor of this decaying material is characteristic, and can frequently be detected before opening the hive, even when but few diseased cells are present. If a pin or a small stick be inserted in a dead larva and withdrawn the material stretches out in a fine thread or is "ropy." This characteristic is usually the final clinical test in the diagnosis of this disease. In the earlier stages the color of the dead material is best described as that of coffee diluted with milk, but later the color is dark brown, and finally the dead larva dries down to a mere dark scale which adheres firmly to the lower side of the cell.

The bees are seemingly unable to remove these scales. They may be seen in any comb that has contained American Foul Brood by letting a strong light strike the lower side of the cells and looking into them at such an angle that the line of sight strikes the lower side of the cell about one-third of its depth. Each of these scales contains innumerable spores, each of which is capable of producing the disease in a healthy bee-larva.

TREATMENT.

The underlying principle of any treatment of either of brood-diseases is the complete separation of bees and the infected material. The plan usually followed is the so-called McEvoy treatment, which, given in Mr. Evoy's own words, is as follows:

"In the honey season, when the bees are gathering freely, remove the combs *in the evening* and shake the bees into their own hive; give them frames with comb foundation starters on and let them build comb for 4 days. The bees will make the starters into comb during the 4 days and store the diseased honey in them which they took with them from the old comb. Then in the evening of the fourth day take out the new combs and give them comb foundation to work out, and then the cure will be complete."

While Mr. McEvoy does not advise disinfecting the hives, it is always advisable to do so, as many cases of reinfection have been reported when the bees were shaken into the same hive.

Hives may be rendered entirely safe for use again by charring the inside by means of a paint torch or by burning out with kerosene.

No. 6.—Apiary of Andrew M. Pultz

This is a picture of the apiary of Andrew M. Pultz, of Lake Preston, S. Dak. Mr. Pultz reports a very bad spring for the bees, which seemed to be the style practically all over the country this year. Frost killed all the fruit-bloom, and up to May 18 dandelion was all there was for the bees to work on.

Indiana Fair Apiarian List

The 57th annual State Fair of Indiana will be held at Indianapolis, Sept. 12 to 16, 1910. In the apiarian department $230 in cash premiums is offered. Mr. Geo. W. Williams, of Redkey, Ind., is to be the judge. For further information, also a copy of the premium list, address, Charles Downing, Secretary Indiana State Fair, Indianapolis, Ind.

Wisconsin Inspector's Report

Mr. N. E. France, who for 13 years has been the inspector of apiaries for the State of Wisconsin, has issued a neat pamphlet report for 1910, covering 24 pages. Besides his 13th annual report as inspector, it contains Secretary Dittmer's report of the last meeting of the Wisconsin State Bee-Keepers' Association. Every Wisconsin bee-keeper should have a copy of this report. Send to N. E. France, Platteville, Wis., for it, if you haven't already received a copy.

Back Volumes of the American Bee Journal

We frequently have calls for back volumes of the American Bee Journal beginning from Vol. I, 1861. Occasionally we receive notice that one of our old snbscribers has passed away, and in one or two instances the relatives have been kind enough to write us that all the copies of the Bee Journal have been saved, and they would be pleased to send them to us. We appreciate such offers very much indeed, and wish to say now that we would like to hear from any one who has been careful enough to preserve the back volumes of the American Bee Journal, as quite often we have calls for such volumes, and would be glad to supply them. We hope that no one would think of destroying the copies of the American Bee Journal, as they cerainly are rally valuable, having a historic interest that increases as the years pass. There are institutions, such as agricultural colleges, etc., that often wish to have a complete set of volumes of the American Bee Journal, and, of course, they apply to us first, to find out whether we can furnish them. So, hereafter, we will appreciate it very much if the relatives of the deceased subscribers who have taken the American Bee Journal for a half century or less, would be sure to preserve such back volumes and write us about them.

"What kind of a career have you mapped out for your boy Josh?" "I'm goin' to make a lawyer of him," answered Farmer Corntossel. "He's got an unconquerable fancy for 'tendin' to other folks' business, an' he might as well git paid for it."—*Washington Star.*

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Bees Hanging Out On the Hives

I have a few bees which I am very much interested in. I live in Charleston, S. C. The weather so far has been quite cool, but in spite of that the bees hang on the outside of the hives, and stay there from a week to 3 weeks. It is not because the hive is full of honey, for I have looked and find plenty of comb not sealed. Why, do you think, the bees hang on the outside of the hive? The front of the hive is so full of bees that I don't see how they manage to go in and out.

These colonies I speak of have swarmed 2 or 3 times. Where do you think the queen is? And would you advise me to catch some of these bees and put them into another hive? Some of my hives are old-fashioned box affairs. Do tell me how I can catch the queen. EMMA FURMAN.

At this distance it is not easy to be entirely certain why the bees hang out in clusters on the hives, but it is a pretty safe guess to say that it is more comfortable out than in, just as you may find it more comfortable sometimes on a hot day to sit out on the shady side of the house. It may be that there is too small an entrance, giving too little chance for ventilation. It is hard to give too large an entrance in hot weather, only there should not be more than an inch of space under the bottom-bars, else the bees will build down comb in the space. Some raise the hive by putting little blocks under the 4 corners. You can also increase ventilation by allowing an opening above. Let the upper story be slid forward so as to leave a space of ¼ inch at the back end. It makes a difference if the hive stands out in the hot sun. Sometimes when a good flow is on, the bees will hang out at night, when all the bees are at home, and in the daytime, when all the field-bees are out at work, the outside of the hive will be clear. Sometimes bees hang out for no other reason than that there is nothing to do in the fields, and they may just as as well be clustering idly on the outside of the hive as to be wearing out their lives in the field where there is nothing to do. It has been advised to smoke the bees to make them go to work, but that probably does more harm than good.

It is practically impossible to catch a queen in a box-hive. If you are smart enough, you might catch her when she issues with a swarm. You might also drum the bees out into an open box; but it would be hard to find the queen then. In a movable-comb hive it is easy to lift out frame after frame until you come to the one on which the queen is found.

You would likely gain nothing by taking the bees that are clustering out and putting them in other hives.

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How a Texas Sister Extracts Honey

DEAR MISS WILSON: I often wonder how many of our sisters like extracting. I, for one, immensely enjoy it. It is about all I do during the extracting season. I attend to the frames in every way. My husband takes them from the hives, and I extract them. When one comes to think about it, it is a job, though not a heavy one.

If system is needed anywhere it is certainly needed in the honey-room. As I have told you before, we run mostly for bulk-comb honey. As the frames are brought in, the white ones suitable to be cut out are put in one place, end those to be extracted in another.

We have not yet gotten to where we can afford an uncapping melter; but all in good time. I have an ordinary washing tub on which I place a box, with screen-wire in the bottom. The screen-wire comes up on the outside of the box at least 3 inches, and is firmly secured thereon with strips of pine 2x¼ inches, the full length of the box on all four sides. This prevents the wire from pulling loose with the weight of the cappings. Nailed across the top of the box is a 2x¾ inch strip with a half inch depression in the center in which to rest the frame while uncapping.

I use a hot, sharp knife, and the downward stroke. At present I am using the old style Bingham knife, but would dearly love to have the Bingham Improved, with the flanged shank and 8½-inch blade. I find that the cold knife, dipped often in ice-cold water, works very well, but with the hot knife one can work much more rapidly, especially on the thick frames. As to the downward stroke, why, I find that I can hold the frame steadier, have more power in my wrist, that the weight of the knife helps a great deal, and that the cappings roll off free from the frames, be the angle what it may. Should the cappings not want to curl over, just push the knife forward until the thumb comes in contact with them, and give them a flip with the thumb. With the upward stroke the frame *has* to be at a certain angle or the cappings stick to the frame, which is a decided nuisance. We have a 2-frame non-reversible Root extractor, which we hope to replace this year with a 4-frame reversible.

The extracted frames are placed by themselves nearest the door, so as to be accessible to the one who carries them out to be given back to the bees. Each frame is carefully examined to see that the comb is straight. Should a corner, or other part bulge, it is cut loose with a pocket-knife and pushed in place.

As we have several extra frames, those taken from a hive are immediately replaced with them, the hive closed, and the little ladies just keep right on with their work as though nothing had happened; except, perhaps, with renewed energy.

Two years ago we had no extra frames, so the extracted frames were not given back until late in the evening, when the bees would be fractions to the last degree, and, at times—well, ugly, especially when smoke was used. On the cover there would be two-thirds of the bees. If left until early next morning (to avoid the second opening of the hive on the same day), comb building on the cover would be well under way—to make a long story short—24 hours hard labor lost. With the present method everything is accomplished with one manipulation.

Mr. Pruitt starts work just about 20 minutes before I do, and I finish the last frame just about one-half an hour after he quits.

My work in the honey-room, though, begins long before his does. Take, for instance, one day—my first duty is building a fire and putting on two dinner-pots *full* of water to get hot; next is washing and squeezing out the cappings of the day before. Then the honey in the tub is poured into the extractor and the box put on ready for use. Next, all the buckets, pails, etc., that I shall need for that day are washed and gotten ready, and the extractor oiled. I use a small medicine dropper with which to oil it; it is very convenient. The knife is then whetted, and one of the pots of hot water is brought in, and I'm ready to start. Extracting then goes on until—say about an hour and one-half by sunset.

The gate is left open all the time and a full pail is replaced with an empty one. In this way it is easier to keep the very whitest from mixing with the darker honey. Of course, one has to keep one eye open, but with a little experience it is not so dangerous as one would think.

As soon as one pot of water gets too cold the other is brought in. Frequent dipping of the hands in the wash-basin keeps the handle of the knife and the crank from getting sticky. Also wetting the hands well before attempting to tie the tender combs is absolutely necessary.

My method of tying is to catch one end of the string with the left hand, holding the frame and string together. Then wind around about 4 times towards the opposite end of the frame and pull tight, then back again, and rest the right hand end of top-bar on the extractor, and pull tight again, even to the bending of bottom-bar, and tie. The tying is done, of course after the comb has been uncapped on both sides. After it is extracted the string is left on and the bees carry it out. It takes up too much time to untie them, and then too much trouble to tie the next weak comb with the same string.

After the extracting is done I pull all the cappings to one side of the uncapping box, and run them through my hands a few times, tearing them up in very small pieces, and gradually work them over to the opposite side. I then smooth them out about level and scoop out a little in the center, clear down to the screen-wire, and leave them to drain until morning. The idea for this massaging allows the honey to drain out much faster, and leaves the cappings drier than did the old way of leaving them just as they fall from the frames. This is original with me, although others may do so. I would like to know if they do.

The next thing on the program is to cut out the white frames and put in jars ⅔ full of honey, or in other vessels. Said vessels are washed and dried off, and an attractive label is placed on them, when they are ready for the market; and what jolly times we have selling it!

The empty frames are then scraped of all wax possible, and washed. They are then put aside until the honey-room is cleaned up, the floor swept and washed, and everything is left in apple-pie order. The frames are then taken to the kitchen and put, a few at a time, in the oven with the door open, and when warm (the first put in is generally just right by the time the last is put in) are scraped and the groove cleaned out. All the wax is put in a frying pan reserved for that purpose. When all are gone over, the frying pan is put on the stove, and by the time the starters are cut, the wax is hot enough to solder them in with. So ends the extracting part of that day. And have you noticed how white and clear the hands are by the time 3 or 4 such days are over?

I expect I may just as well own up that after the cappings are massaged and as much of the honey as possible is removed from my hands, my face and neck are also massaged and the honey well rubbed in. My arms generally manage to take care of themselves, as my sleeves are always turned up as far as they will go. If the honey is too thick the thing can be remedied by dipping the hands slightly in water. The honey is left on until the room is put to rights and then washed off last thing. Laugh all you wish to, but, all the same, honey beats cold cream, powder, perfumed waters, and goodness knows what, all to smitherines.

The most needed accessories to the honey-room are, a wash-basin, a towel, several large dish-rags, two large dish-pans, a bucket of drinking water, and a cup. A tablespoon and a case-knife come in handy now and again; and such things are bound to be most needed when not accessible, so one may just as well get them first as last.

A ball of string in a paper baking-powder can threaded through one side of it is mighty convenient. Punch a hole in the opposite side from the hole where the string is threaded through and force it over the head of a nail in the wall well to the right of the extractor. The nail should lay almost against the wall, pointed straight up. A screw driver, a hammer and an assortment of nails are also very needful at times.

Arrange so that everything is handy, get one thing out of the way of the other. After supper I have to myself, for study, etc., which consists chiefly of reading my back bee-papers (of which I take two), or my poultry journals, unless, of course, I happen to have new ones on hand.

Now, I want to tell you what I heard from two different people, and you can take it for what it is worth. When honey is scarce and sugar is high, the best thing to winter bees on is a baked chicken! Just place the tidbit on top of the brood-frames, then a shallow super (say a section-case that carries the 4¼x4¼x1½ section), and replace the cover. Of course, a little pepper and salt added, to season it with, might be acceptable. Wonder if canvasback duck wouldn't do as well.

We are having a bountiful crop of catclaw honey this year, and the mesquite is giving very fine promises. There are as many as 87 blooms (actual count) on catclaw twigs a foot long, and the blooms are at least 1½ inches long.

I want to give you all two warnings in one: Don't send for bee-supplies farther from home than is absolutely necessary, let the price be what it may. Be sure to be very careful that you order correctly all the way through. I heard of some sections that I could get very cheap away up in Wisconsin. I sent for 1000, and asked them to send them by express, as we wanted them right away. Oh! how dear they came out in the long run! Actual price was $2.85 per 1000, and the express charges to San Angelo our nearest express office) $5.50—$8.35 in all. We had been paying $5.00 a 1000, and $1.00 express—$6.00 in all. I wanted 4x5x1⅛. I got 4x5x1½. It was a job to cut off that ⅛ inch 1000 times, but it's a lesson I'll never forget. Expect I'll read my orders over a few times before I send them off in the future. I don't know for certain whether *I* was to blame or the firm, but I *do* know that I want you to profit by my experience.

We have increased to 151 colonies, having 120 last summer. MRS., M. E. PRUITT.
Eola, Tex.

It can not fail to interest the sisters to have such explicit information as to how things are done by one who seems to know just how to do them. Even the "lords of creation" may not find Mrs. Pruitt's article without information. How nicely little details are given. Take that can against the wall with the ball of string. Without the hint that the nail against the wall must be bent up just right, some one would leave the nail horizontal, and the first time the string was pulled the whole would tumble to the floor, and the thing would be voted a failure.

Even reports of mistakes are helpful. And that suggests whether one might not ask in a gentle sort of way whether it is not a mistake to have bee-supplies sent by express. "Too much of a hurry for the supplies to wait for them to come by freight?" Well, possibly it is a mistake to wait so long before ordering that there is any haste in the case. To be sure, one does not know in advance what the season will be, and so one does not know just what will be needed, but one can order enough to meet all possibilities of a bumper season, and if not needed the supplies will keep till another season.

Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ontario, Canada.

Short Honey Crop

Clover is yielding heavily (June 23), but our bees dropped out of sight, so to speak, just at the close of the 7 weeks of cold weather, leaving hosts of young bees and great quantities of brood. Of course that means a short crop for us, but what bees I have in good shape are certainly storing very fast.

Foul Brood and Black Brood

Thanks, Mr. Morrison, for what you say on page 182, about the naming of the different brood-diseases, or rather, shall I say, the attempt to change the existing names to something else. Acting on your implied advice, and my own judgment in the matter, this scribbler is done for all time with the name "European" foul brood, and from now on whenever I have occasion to refer to the brood-diseases of bees, it will be "foul brood" and "black brood."

Bee-Keeping in Finland

A pleasant surprise in yesterday's mail (June 10th) was a letter from our friend, Paul Mickwitz, of Helsingfors, Finland. Last autumn, just before Mr. Mickwitz sailed for his home land, we had the pleasure of having him in our home for a few days, and his visit will always be remembered with pleasure, as he possesses the happy faculty of making you feel that he is "right at home" from the moment he comes under your roof.

Writing under date of May 28th, he says that the weather is very cool and backward this spring—a condition that seems to be general all over the northern part of the globe, seemingly. In his bee-keeping operations he is giving preference to the Carniolan race of bees, and, judging from my experience with these bees, I think his choice is wise indeed for a climate as severe as they have in Finland. In fact, for a climate we have *here*, for the present spring at least, the Carniolans are not in the same class as the Italians, as the latter will not breed up satisfactorily in this bad weather without being "nursed," while weather makes no difference to the Carniolans, if there is honey in the hives to draw from. I borrow the word "nursed" from Mr. Alpaugh, who although an admirer of the Italians to the exclusion of other races, yet admits that they need more attention than some other bees, in so far as early brood-rearing is concerned.

Mr. Mickwitz says that for winter stores the bee-keepers in Finland and some other European countries, use a preparation called "nectarin," in preference to honey or sugar—the latter being all beet, no cane-sugar being used there. The winters are very cold, and the bees are often confined to the hives for a long season without the option of a flight, so no doubt the food-supply is a very important factor in wintering—indeed, it is the main factor here in our country, too.

In reading over Mr. Mickwitz's chatty and interesting letter, I was led to wonder how he in such a short time became so familiar with the English language—a language which is generally classed by linguists as being difficult to learn. In the whole letter I doubt if there is a mistake in spelling or punctuation, and yet when he arrived in America a little over two years ago, he could not speak a word of English. It certainly speaks volumes for his ability and "sticktoitiveness," in that he so thoroughly mastered so great a task in so short a time. Many who heard him speak at the Detroit convention, in 1908, will remember that it was quite difficult for him to express himself, and when he came to our place last fall I was surprised to see how fluently he could then talk in our language.

An amusing incident just comes to mind in connection with the language in question, and I feel prompted to relate it to the readers of this Journal. On the first day of Mr. Mickwitz's visit with us, I happened to receive a sample of some splendid basswood honey from a bee-keeper near Lake Erie. After the two of us had generously sampled it, he turned to me and asked how I liked it.

I replied in a serious manner, that to me it tasted "*morish*." He looked a bit quizzical, but offered no reply at the time, although I could see that he was doing a bit of figuring on his own account. Shortly afterwards, while he was sitting at the type-writer in the next room, I heard a jolly "Ha, ha, *mor-ish*—like more. Pretty good, pretty good." The incident shows how thoroughly he had mastered the intricacies and idioms of the language—even when he could discern the meaning likely to be attached to such an expression as I had made.

How I wish I could speak the mother tongue of Mr. Mickwitz, for indeed I would then look forward to visiting him some day in his far off home; as it is, I count it a great privilege to be able to correspond with him, and thus keep in touch in a measure with the bee-keeping methods of his country.

Before dropping the subject for the time, I might also add that Mr. Mickwitz is thoroughly imbued with the so-called American system of bee-keeping, and will practice it in his operations. It appeals to the writer as being a fortunate circumstance toward bringing about a better understanding between European and American bee-keepers, as one so gifted as Mr. Mickwitz can not but be a help towards that desired end.

"A Hint to the Wise," Etc.

It is generous of the Editor to tell the readers of the Journal that I did not put that heading to the "busy bee-man item" in last issue of Canadian Beedom, but he might have gone farther and told them also that he was printing a private note sent along with the regular stuff—said note being a sort of apology for my being late in sending the copy. Don't any of you run away with the idea that I work half as hard as that note would intimate, for as a matter of fact I am somewhat like the bees—work like fun sometimes, and then loaf a whole lot at other times.

Just as to what form of revenge I will take on our Editor over the matter, I have not yet decided. Any *hints* from readers will be acceptable.

[Again Mr. Byer did not put the above heading on this item.—EDITOR.]

A Variable Season

Right up to May 12th the weather was cold—so very cold for the time of the year. Since that date it has been hot—very hot even for the month of June. About June 15th, clover started to yield, and at present (June 23) the flow is fine.

But, unfortunately, the most of the bees in the country are not prepared to take full advantage of the flow, as during the first week of June the old field-bees in the most of my colonies seemed to melt away out of sight in a discouraging manner. For the opening of this heavy flow, I have baby bees and great quantities of brood—many colonies that filled the supers with bees in May are not now strong enough to enter the supers. The length of time the flow lasts will gauge the amount of surplus honey I will obtain, but at present I am not counting on very much clover honey.

More about this next month.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

The Albany National Meeting

Albany, N. Y., should be a pretty nice place to hold a great, big meeting of bee-keepers next fall. Let us who can go at all prepare to go and have a great, big time. Let us begin anew; wake up from our long sleep, as it were, and revive matters pertaining to bee-keepers' conventions once more. It has seemed as if we have been playing "Rip Van Winkle" for the last several years, and have left much undone toward making our annual meetings what they should be. Why should our interest be waning? Is our industry getting to be of less importance to us, that we have lost that enthusiasm, that energy and interest that used to possess us when it came the time for going to the annual bee-meetings? What say you?

"Chunk," "Canned," "Cut," or "Bulk" Comb Honey?

These are a variety of names used for one and the same thing. But what's the use of having so many? Besides, there is only one right one, or only one that covers all the others, so let's get into the habit of using this one—the right one.

"Chunk" honey is so much used, but I venture to say that most of the users of this term do not know just why they use it. It may be all right to apply this to chunks of comb honey taken from bee-trees or "gums," etc., but when we talk of our bulk comb honey we do not include for a moment such stuff as "chunk" honey from bee-trees and box-hives.

"Canned" comb honey has been a term suggested for bulk comb honey, but not all of the bulk comb honey is put up in cans, or "canned;" therefore, this term does not apply.

"Cut" comb honey is given to comb honey cut up into small squares and wrapped up into fancy packages. We might also have "boxed" comb honey which is put up in fancy tins made to hold a pound or so of fancy comb honey.

But, after all, it is *bulk comb honey*, no matter how it is put up for the market. The method of production will be the same for all, and it will be produced in bulk in frames, hence is bulk comb honey.

Therefore, all that has been mentioned in our articles thus far, and our articles to follow, will cover all these styles of honey under one term—*bulk comb* honey. As soon as we get to our articles under putting up bulk comb honey for the market, the readers will find that we have many ways for putting up this product in a nice, neat, attractive and sensible way, to meet all demands, from the poorest to the richest purchaser, for the consumer, the retailer and the jobber. This includes tin cans, pails and boxes, glass jars of various sizes and shapes, and several varieties of fancy paper cartons and other packages.

So it will be remembered that all the comb honey produced other than section honey, must come under the one head of "bulk comb honey."

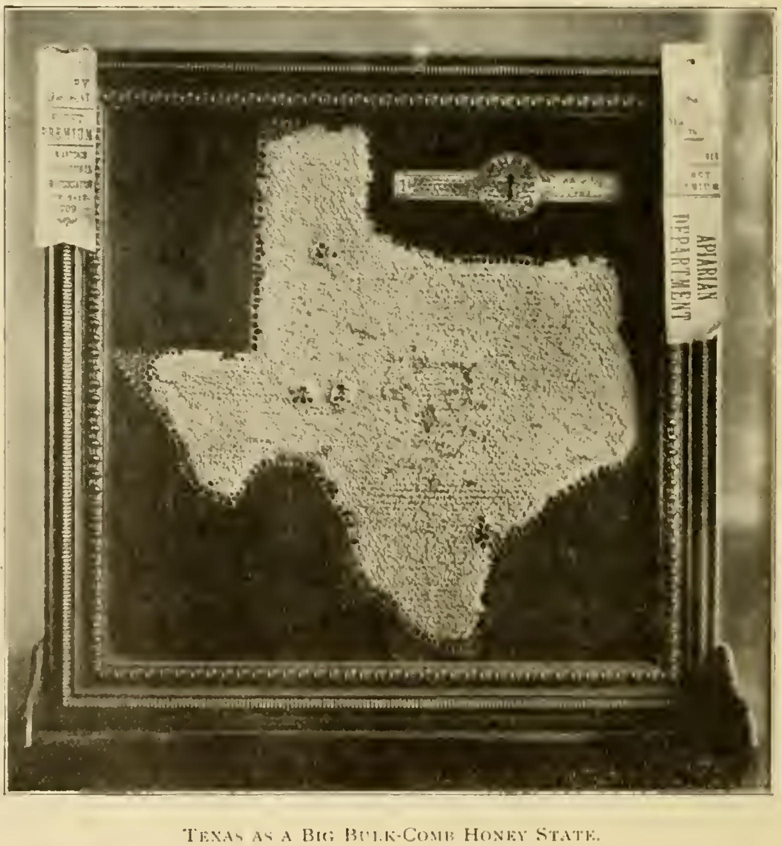
Texas Solid in Bulk-Comb Honey

That Texas was as solid on bulk-comb honey as our map shows, very few of our readers have been able to realize, although much has been written and said on the subject. Nevertheless, it is a fact that more bulk-comb honey is produced in Texas than all the other kinds put together. And then, since it takes extracted honey to fill up the containers of comb honey, to make what is known as "bulk-comb honey," we could take the extracted honey produced in Texas to fill up with the comb honey that is not already bulk-comb honey, and "Texas *would* be solid on bulk-comb honey."

The Texas bulk-comb honey map was built by a colony of bees belonging to one of the writer's friends, Mr. Willie Wiede, of Maxwell, Tex. It was shown last fall at both the Dallas State Fair and the San Antonio International Fair, where it attracted great attention. It captured the first prize on special designs in comb honey, at both places. The map is beautifully built of white comb. It measures about 2 feet square, for the frame work and all. Mr. Wiede has received many congratulations for his skill in obtaining this piece of bee-keepers' art.

Knowing a Good Thing

Jimson Ragweed, on page 193, is right, in that we Texans know a good thing when we see it. Consequently our annual output of millions of pounds of bulk-comb honey is consumed here



Texas as a Big Bulk-Comb Honey State.

at home, and the outsiders, in other States, see very little of Texas honey. Other States could do as well as we if they would. If it be remembered that the great Lone Star State is the leading honey producer in the Union, produces more honey than any other State, while its population is comparatively less, for its great size, than the Northern and Eastern States, it must be plain that these States with a greater population, ought to consume a great deal more honey instead of having to ship it to other markets.

Bulk-comb honey has solved the problem for us, and we know a good thing when we see it. We long ago overcame the question Dr. Bohrer propounds on page 190. "But isn't extracted honey produced a little cheaper than either section or bulk-comb honey?" is an old question that has been put to us many times. And it has been downed just as often by the very fact that when the consumers want comb honey they do not want extracted. If section honey is too high in price (which it is for the great masses), then they want no honey at all. Here is where bulk-comb honey fills the bill, and no amount of arguing can do away with it. We have proven this to our entire satisfaction in the most extensive way for a number of years, and in our articles we have only tried to set forth its merits, but not with the idea of forcing a method of honey production upon others, except to give our extensive experience to those who desire it, and to those who have asked for it.

Painting Hives

That this subject was settled long ago has been my opinion of the matter, despite the fact that Dr. Miller, and one or two others, for some reason or other, still hold on to their idea of finding objections to painting hives. But every once in a while out it crops again. This it should not do, for a very serious reason, and that reason is this: A beginner has no business to know of Dr. Miller's tenacity for unpainted hives, as it will only mislead him. Since a beginner is only too likely to follow a great authority, is the very reason. There are too few reasons for not painting the hives to warrant it in all localities, or even in some of them, Dr. Miller's not excepted, and since the great majority the world over paint their hives, have good reason for doing so, and find that it pays to do so, the writer being only one of them, let it be a settled matter that the majority rules, and hives should be painted.

"The Amateur Bee-Keeper"

This is a booklet of 86 pages, written by Mr. J. W. Rouse, of Missouri. It is mainly for beginners—amateur bee-keepers—as its name indicates. It is a valuable little work, revised this year, and contains the methods of a practical, up-to-date bee-keeper of many years' experience. It is fully illustrated. Price, postpaid, 25 cents; or with the American Bee Journal one year—both for $1.10. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

National Bee-Keepers' Association

General Manager, N. E. France, Platteville, Wis.

If any member of the National wants a copy of my State Inspector's Annual Report for Wisconsin, and will write me for it, I will gladly mail a copy of it.

A renewal of membership was just received from a bee-keeper who has kept bees the greatest number of years continuously—88 years, I believe. The member is John Cline, of Darlington, Wis. The "boys" stay with us.

The membership of the National today (June 18) is 3885. It will be more than 4000 by the time of the National meeting. There are a few who should renew now, but after the honey-harvest all will attend to that, surely.

Many report that their bees are doing well. Today we began extracting, and took off a ton of honey. My son, who does all the uncapping, says of all the several methods of uncapping honey, he prefers the steam-heated knife.

Albany, N. Y., has been selected by the Executive Committee as the place of meeting for the National Bee-Keepers' Association this year. It will be held October 12 and 13, in the Common Council Chamber of the City Hall. Get ready for a very large and enthusiastic meeting. Every bee-keeper who can possibly arrange to be present should attend this meeting. Particulars as to the date, program, etc., will be announced later. Watch the bee-papers for it.

The program of the next meeting of the National Association is being prepared. It promises to be one of the best meetings the National has held in many years. If the honey crop should prove to be a good one between now and that time, the attendance ought to be a record-breaker.

A bee-keeper sent his National dues claiming he wanted help at once as his swarms alighted on his neighbor's apple-trees, and the neighbor with a revolver said he would shoot trespassers. He claimed the bees ruined his apples, and sucked the juice from his onions! How is that for charges?

The number of copies of the last Annual Report of the National are getting low, but so long as there are any left I will mail a copy to each new member. Also, for 4 cents for postage on each copy, I will mail to any one other back numbers of Reports, as there are a few of them still left, if they are ordered.

Contributed Articles

Swarms and Swarming—Why Bees Swarm

BY D. M. MACDONALD.

An investigation of the prime factors causing swarming may be the best means for clearing the atmosphere and giving us a clearer vision of the whole enigma, because, for all that has been written on the subject, we still only see as through a glass darkly.

1. Heat is a prime factor beyond a doubt. As certain as that the temperature will rise to a certain height, so certain is it that the feverish spirit of unrest will guide the Spirit of the Hive to teach the prescient little workers that the four corners of their hive is not the whole world; but that strange fields and pastures new await them, ready to bless, and be blessed, by their welcome labors.

2. A honey-glut, perhaps unexpected and unannounced comes suddenly on. The queen's domain is appropriated by the laborers that must store the prized nectar in every available cell. With gay abandon cells are formed and the swarming fever is generated, not to be allayed until the wise purpose of Creation is fulfilled. "Multiply and replenish the earth" is their guide and motto. Every single atom of the 40,000 inhabitants of that hive has got the sentiment permeating every fibre of its being, and the teeming thousands act as if they were one sentient whole, with every heart and mind bent on one single object.

3. Brood congestion, from whatever cause, evolves discontent. So many youngsters issuing cause a glut of the nurse element in the community. The thousands of young bees issuing every 24 hours produce too much chyle food, which goes to waste, because others have been before them at every open cell flooding the young larvæ with "pap" food. The competition is in fact so keen that the majority of the nurses find their occupation gone, consequently too many of the hive inhabitants are numbered among the unemployed. Satan finds some mischief still for idle bees to do, and so a spirit of discontent and unrest arises because they can neither toil nor spin. Therefore we have another swarming fever generator in this state of congestion.

4. A confined space for the queen's ovipositing is one of the main causes of swarming, says the advocate of the large hive to the small hive disciples, and of course in a measure there is at least a modicum of truth in the contention for small hives, *i. e.*, those affording the queen only a circumscribed brood-area are fertile factories for begetting the swarming instinct, although, of course, the small-hive man has it in his power to overcome this drawback in quite a number of different ways without any resort to "Draper's barns" or Jumbo hives. The fact remains, however, that a queen simply must oviposit while in the full flush of her laying, even to the laying of several eggs in a single cell, or by dropping them promiscuously about. What can the far-seeing worker do to ease the tension but look ahead and trust to fortune for the establishment and fitting up of some new home.

5. A lack of super space on a hive during a full flow will act just as it did in the time of our forefathers who worked under the defective system of small straw hives. Early in the season even bees began to bunch out on warm days around and above the entrance until the flight-board and front of the hive were black with them, and great festoons hung down bunching from the floor-board right to the ground. Pursuing the same short-sighted policy with our modern hives, what can we expect but that bees will act in the same way as they did in the bad old days? That we know a cure is easily and quickly applied is of little use unless the knowledge is acted upon.

6. When a queen is no longer young, some instinct teaches the bees that they should look ahead and prepare for future contingencies. Their prophetic vision reveals to them that annihilation must follow the loss of a mother-bee at a season of the year when they have no means of securing a successor, and so, taking time by the forelock, they proceed to anticipate that untoward event by making hay while the sun shines; or, in other words, creating one or more queens to meet all possible danger of sinking into nothingness. The doctrine so frequently enunciated, "Keep only young queens," is simply a lesson taught us by the wisdom of the bees.

7. That certain strains and races of bees are inveterate swarmers is a truism which needs only to be named, for no one will seek to dispute the point. Carniolans, for instance, have been known to send out at least six swarms in one day, although there are Carniolans and Carniolans, because it may be charitably presumed that the devil is not so black as he is sometimes painted.

8. Ventilation is certainly a prime factor to be reckoned with in producing or hindering swarming. I am not indeed prepared to say that it is the chief, but taken in conjunction with one or two of the other points enumerated, it is the one requiring most care and attention from the bee-keeper. Take a hive boiling over with bees, a broiling hot sun with a temperature at fever heat, a confined brood-area, a small surplus space, combined with a small entrance, and we have a concatenation of circumstances which almost inevitably leads to swarming, let the bees be of whatever race or strain they please. The cause is there, and result follows cause.

9. An overplus of drones in a colony of workers is undesirable. Their presence seems to lead the minds of the Amazonian host astray from wholehearted thoughts of industry. A spirit of unrest seizes them, and they connect the presence of so many males with a necessity for the construction of queen-cells, and immediately chaos follows. Nothing but swarming will cool the fever.

10. Location balks considerably in begetting the desire. Certain sites and surroundings produce the crave. Absence of shade, full exposure to the sun, an over-sheltered cosy nook, each of these, or all combined, generate the impulse. Hives kept in such positions breed the "bacillus" more readily than where the apiary is in an open, exposed situation.

11. Stimulative feeding by causing active breeding early in the season raises thoughts in the workers' craniums which would never have entered there if they had been left to their own devices; therefore, if possible, let stimulation alone wherever possible, if there is a desire to curb swarming.

12. Checks or hindrances to the free movement and intercourse of the bees in the hive interior mean temptations and inducements to the bees to beget the swarming fever. Many of these might be named, such as small entrances, badly fitting frames, bad spacing, and chiefly the use of excluder zinc.

Next month, Some Means of Prevention.

Banff, Scotland.

Queens Mating More than Once

BY ALEX. SCHROEDER.

Under this heading I have found an article in the January American Bee Journal. Seldom, but yet sometimes, it is an advantage in getting old, inasmuch as we can remember what the younger folks cannot! The mating more than once of queen-bees is not new to me, and I will cite a few instances when repeated matings of queen-bees were observed, which I hope will be of interest to the American bee-keepers.

In the year 1875, Janscha, of Vienna, Austria, in his book "Complete Instruction of Bee-Keeping," on page 6, stated that a queen-bee was fecundated only once for her lifetime. In rare cases the mating done but once may not bring about a perfect fecundation (filling of the spermatheca) von Siebold (Bienenzeitung, 1867, page 159); as Dzierzon (Theoric and Praxis), 1849, page 106; (Bienenzeitung, 1853, page 44; 1861, page 14;) Baron Berlepsch, Vogel (Bienenzeitung, 1858, page 19;) Hemmann (Bienenzeitung, 1860, page 213;) Rothe (Bienenzeitung, 1864, page 168)—have all seen queen-bees fly out again more than once, which they had observed to return with the sure sign of consummated mating. In all these cases, however, it was observed that the queens that had returned to their hives with the sign of mating repeated the flight, but not that the repeated mating had taken place.

Dzierzon (Bienenzeitung, 1861, page 15); Huber (Huber, Kliene, 1856, No. 1, page 46), however, saw in two cases queens which had returned with the sign of copulation, fly out again and return once more with the same sign. The same was observed by Gutler (Bienenzeitung, 1857, page 11;); Hempel (Bienenzeitung, 1861, page 118;) and Leuckhart (Bienenzeitung, 1867,)

There may be many obstacles hindering the sperm from entering into the spermatheca, and the lust of the queen, not satisfied, may press her for more mating flights.

All these observations, which I have found quoted in Berlepsch's book ("The Bee" third edition, 1873), however, confirm that a queen once fecundated and laying eggs does not fly out again unless to lead a swarm.

Trieste, Austria.

No. 2.—Spanish-Needle and Catnip

BY C. P. DADANT.

In my young days I was told that the bees harvest a great deal of honey from the goldenrod, and I was of course convinced that the bright yellow honey gathered during the blooming of that plant was harvested from it, although the quantity of such honey often seemed to me very large for the limited number of goldenrod blossoms in the vicinity. But after a few years, while watching the results, I noticed that the bees were rarely to be seen upon goldenrods at a time when they came home laden with golden honey and themselves covered with a bright yellow pollen which gave a tint to everything inside of the hive. The goldenrod blossoms were then visited mainly by a large black beetle which remained upon them for hours.

I became convinced that something else was producing this abundant harvest, and soon discovered the "Spanish-needle," a low, marshy plant with a fine yellow blossom in the shape of the sunflower, but of small diameter. There are several kinds of this plant, classed among the Composite family under the name of "bidens"—in French, "bident," or two-toothed, thus named from the two or more teeth, sharp and armed with bristles, which the seed carries and which cause it to stick to clothes or to the hair of animals.

The bidens, burr-marigold, beggar-ticks, Spanish-needles belong mainly to wet soils in this latitude. We find it along the ponds or the marshy places of our prairies and of the Mississippi sloughs. It also grows in dry spots, but much less profusely. Some varieties have no yellow petals to the flowers, yet this does not prevent them from producing a very great amount of the noxious seeds.

The smell of the yellow Spanish-needle bloom is very readily recognized, reminding me of a field of mustard or rape, such as is grown in many parts of Europe. It was this peculiar odor which I also recognized in the honey, that put me right on the production of this honey. This is one of the principal blossoms, if not the only one, which gives to the fall honey of the Mississippi Valley that bright yellow tinge, and its combs and beeswax also a deep yellow color which bleaching does not remove. The late Mr. Merkle, a wax-bleacher of St. Louis, told me once that they disliked the beeswax produced along the Mississippi, owing to the impossibility of removing this color when bleaching wax.

I said that the honey which I had been once told was from goldenrod blossoms proved to be Spanish-needle honey, and that we harvest no honey from the former plant. I do not mean to be understood as saying that there is no goldenrod honey. After making this discovery of the Spanish-needle, I mentioned it at a local convention, and I found that most other bee-keepers in our Central States are of the same opinion, but after we had decided within our ranks that there was no such thing as goldenrod honey, we met at one of the national conventions hosts of apiarists who were sure that their crop in the fall was almost invariably from this plant, and who had no Spanish-needle in their locality. This occurred mainly in the East.

The honey from Spanish-needle is of such bright yellow color that a drop of it on a sheet of white paper looks at a distance like a drop of yellow beeswax. Its quality is good. It is a little strong, but not unpleasant, and it has the peculiar flavor which many consumers associate with pure honey. In fact, when you offer it for sale, no one will accuse you of offering glucose or sugar under the name of honey, and those of my readers who have offered extracted clover or alfalfa honey for sale know how readily the uninformed consumer will suspect these two grades of being impure, owing to their smooth taste and light color. Basswood honey is also often suspected on account of its whiteness, and I will never forget a naive customer who accused me of having put "some sort of lemonade" in my basswood honey. He could see no other cause for the basswood flavor. Many people will work their imagination at long stretch to suspect the producer of something dishonest.

The Spanish-needles are a very good evidence of the inability of bees to do damage to blossoms by working upon them. My readers have all heard the usual complaint of uninformed and prejudiced orchardists, that when the bees work too much on fruit-blooms it deprives the latter of the nectar which would help them to form, and causes the fruit to be small and knotty, sickly and wormy! If such was the case there would soon be degeneration in the Spanish-needles and other wild plants, for they bloom at a season when the bees are upon them every day, and gather their honey over and over. Yet they produce seed in abundance, with the healthiest kind of burrs. These burrs are doubtless intended by nature to help scatter the seed in all directions, for they fasten to the clothes of men and to the hair of animals. The burrs are almost as tenacious as those of the cockle-burrs, though less annoying.

The French who came to Hancock Co., Ill., under the leadership of Cabet, in good faith, to try the celebrated utopia of Communism, in 1849, settled at Nauvoo, because this city offered to them a number of empty houses, abandoned by the Mormons, who had been driven away two years previously. They probably found the former Mormon homes more or less populated with vermin, and as they also found the abandoned corn-fields occupied with cockle-burrs and Spanish-needles, and knew nothing about these plants except the annoyance which they caused, they called them, in their picturesque language, the former "poux de Mormons" (Mormon lice), the latter "fourchettes de Mormons (Mormon forks). The Spanish-needle indeed resembles a short fork.

One more word about the coloring matter contained in the pollen and in the honey of the Spanish-needle, which is so tenacious that bleachers have been unable to get rid of it. I have read lately somewhere in a bee-paper that the beeswax produced by the bees at this time is of yellow color when first secreted by the bee. I believe this to be an error. I have for years watched the building of the bees during the fall crop, as well as at other times. I have been in the habit of recognizing fresh additions to the combs, even in the height of the Spanish-needle bloom, by the white color of the latest built comb edges. The fresh comb is almost pure white wherever I have noticed it. But with such a gathering of yellow honey and yellow pollen, especially owing to the latter, which covers the bee's coat of hair from head to foot, it is not astonishing that the wax should gain this shade within a very few hours after secretion, since it is such a persistent stain.

As I closed this letter I received another enquiry, this time concerning catnip. "Is it a good honey-plant."

As reputations go, yes, catnip is a good honey-plant, for bees work upon it from morning till night during the months of July and August, at a time when, with us, there is nothing else in the blooming line. But either because catnip is not sufficiently numerous, or because it is an indifferent honey-yielder, there has never been any result. Perhaps it should be classed with the honey-plants that constantly attract bees without yielding enough even for their own consumption. "Langstroth Revised" mentions a plant of this kind, Eryngium giganteum.

Mr. Edouard Bertrand, who edited the International Bee Journal at Geneva for 20 years, having noticed the persistence of the visits of the bees to this plant, had the patience to make a test. He marked some of the bees that worked upon a bunch of this plant in his park, on the shores of Lake Geneva. He then had the perseverance to sit for 5 consecutive hours and watch the same bees working upon the same blossoms for this length of time without apparent results. He nicknamed this plant "the honey-bee's bar-room," for, said he, "they keep sipping without ever getting enough." The echinops, so praised in America some 20 years ago, is of the same useless nature, and I very much suspect the catnip of belonging to this deceiving class, in this section at least.

Hamilton, Ill.

Forming Nuclei, Wax Color, Etc.

BY LOUIS MACEY.

If it is the intention to let the bees rear their own queen (page 393, 1909), why not take 2 or 3 frames of brood and bees—say 3 frames of sealed brood and 1 of honey, *and the queen*—put in a new hive with 1 frame of foundation and a division-board, and set on a new location? It seems to me if this is done just before swarming-time, the queen with 2 frames of bees just ready to vacate cells and go to work nursing ought to do fine, and the 6 or 7 frames left are in a much better condition to rear a queen than a weak nucleus. I'm sure *I* don't want a 3-framer to rear a queen any more.

COLOR OF VIRGIN WAX (Page 394, 1909).

Doesn't "locality," or the color of the honey it is made from, decide this? Our honey is water-white—from sweet clover and alfalfa—and the freshly-made comb is also quite white. I think the yellowing with age is due not only to the heat, but also to the bees crawling over it (probably rubbing on some pollen or propolis), as I have observed some little comb built outside a division-board and left alone, remained white longer than that built at the same time in used frames.

BULK HONEY (Page 402, 1909).

I can sell it at the same price as section honey, and *lots more easily*. It's the "16 ounces to the pound" that does it. I sell it by the super or by the frame ("deep shallow" frames), weigh it all gross; customer cuts it out and weighs back the empties; customer *sees* he gets 16 ounces-to-the-pound of *all* "pure stuff," and I don't even get sticky fingers, Mr. Scholl! But I couldn't sell 10 tons.

A lady told me she "bought a Mason jar with 2 or 3 chunks of comb honey swimming around in *corn syrup!*" Now, we don't believe that was true; but Missourians are not the only people who have to be "shown" when it comes to honey.

GRAY'S FLOUR INTRODUCTION (Page 410, 1909).

Ye who have trouble! Let's not be forgetful hearers. I, for one, am going to try it this season.

HIVE-STAND DISCUSSION (Page 416, 1909)

I can't see that the ancient and honorable "4 bricks" can be improved on; but if one *must* use lumber—I bought some hives last spring that had stands with a maximum of utility and a minimum of material; they were a double T in shape, and made of 1x6 stuff set on edge and running crosswise under the hive-bottom, just inside the end-cleats, and nailed to a 1x4 or 2x4 that run lengthwise under the middle of the hive. Nails are cheaper than boring holes, and there is a minimum of bear

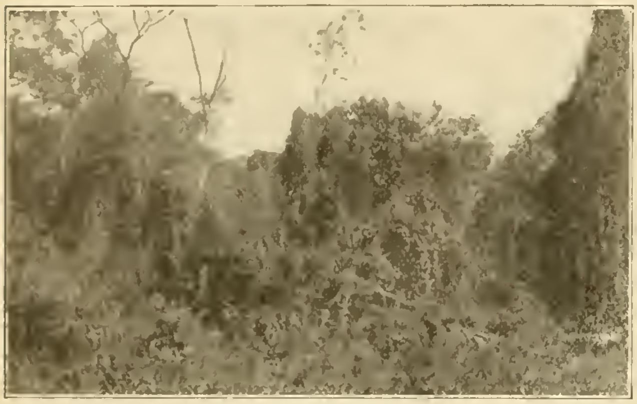


FIG. 1.—VIEW ALONG THE TEHUANTEPEC NATIONAL RAILWAY, MEX.

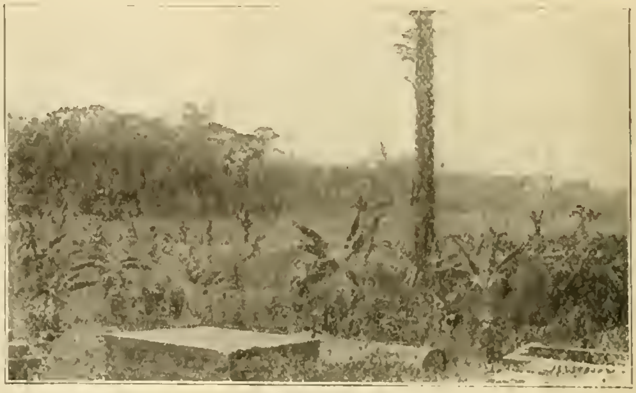


FIG. 2.—VIEW NEAR V. C. & I. RAILWAY, MEXICO.

ing surface, too. I think 1x4 would be better, as 4 inches is as high as I want my hives off the ground, and the cost would be only about 8 cents.

THAT DECEMBER NUMBER.

It was great all the way through, and I have privately made a note of many other things for my own use, but don't want to take too much space here. However, I must "note" the INDEX, on pages 420 to 425. Yes, Mr. Editor, it's worth the space it takes, many times over. If we've been too busy in the summer to "get our money's worth," we can look over this index, and then go back and dig up a-plenty. The American Bee Journal is one of the very few periodicals I keep a file of.

North Platte, Nebr.

Bee-Keeping in Old Mexico

BY B. A. HADSELL.

The pictures shown herewith I took on my second trip to Old Mexico, showing the trees with different kinds of bloom, also covered with morning-glories to the height of 20 to 40 feet. As you are aware, it is hard for a photograph to show flowers to an advantage. While I was through the tropics in November, I found morning-glories the same as when these pictures were taken, March 12. Some of the trees that were in bloom while first down there were now laden with fruit or nuts, and other trees were blooming in their places. In Fig. 1 the trees were almost breaking down with the load of morning-glories.

Fig. 2 shows a new clearing which had been planted to bananas about 6 weeks before. As they had not been cultivated it is a mat of wild flowers. The trees in the background are also laden with bloom, fruit or nuts.

Fig. 3 is typical of the tropical jungle of Mexico, with its sea of flowers in midwinter.

Fig. 4 shows the writer standing in a field of tame green grass on March 6, with a grove of bananas and brush laden with bloom in the background.

I visited one apiary in the neighborhood where these pictures were taken, and found it in a prosperous condition. It was claimed to have been started in the spring of 1909, with 14 colonies, and increased to 94, with 2 tons of extracted honey taken. I tasted the honey, and found it a good quality, and they were selling it at $9 (Mexican money) for 5 gallons. I saw also this same party selling honey at Cordoba, in 1-pound jars, at 80 cents.

After two trips and a thorough investigation of the tropics of Mexico, I have decided to make that my future home, and I am closing out my bees and other holdings for that purpose.

I find native soft lumber about the same price as in the United States, with natives (who are natural born mechanics) glad to work for about one-fifth the wages paid for help in the United States. I think it is therefore cheaper to make the hives from native Mexican lumber, pack my bees in nucleus form with division-boards between, 4 in each Langstroth brood-chamber; therefore saving freight. After arriving in Mexico, transfer all but one into the native hive, and build them up into strong colonies. I see no reason why the extractor could not be running almost continually, and see no need of leaving more than 2 or 3 pounds in the hive at a time.

My son, who was with me (and used $28 worth of photographic supplies), being a practical bee-keeper (as it was the bees that graduated him into a mining engineer), was quite enthusiastic over the tropics of Mexico as a bee-country, and said, "Father, if you will put in 10,000 colonies of bees along the railroads, I will drop my job of $14 per day and help you run them." I felt like he did, but do not expect to go into it in Mexico on so large a scale to start with, although I have just as much faith in it as he has.

Buckeye, Ariz.

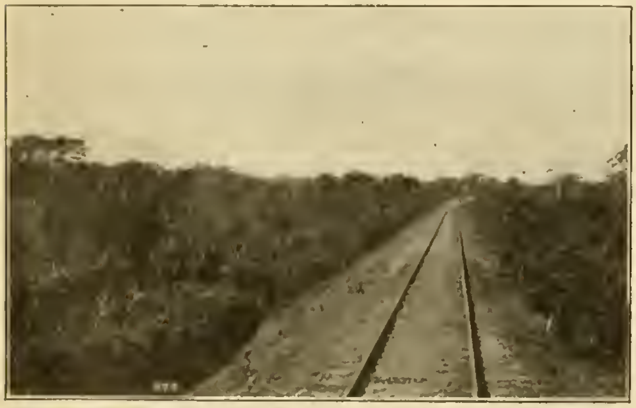


FIG. 3.—VIEW NEAR HULE, V. C. & I. RAILWAY, MEXICO.

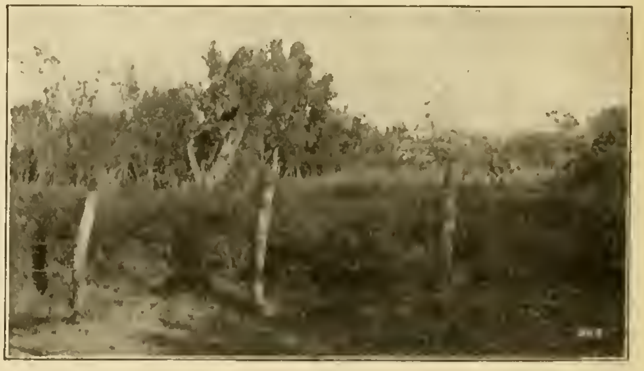


FIG. 4.—NATURAL GRASSES—TONOLO, CHEAPAS, MEXICO.

Making Increase—Best Race of Bees—Getting Worker-Comb

BY G. M. DOOLITTLE.

"I am a beginner in bee-keeping, having only 10 colonies. I wish to increase these to 20, and secure what honey I can. I have commenced to read the American Bee Journal, and am greatly pleased with it. Now I wish you would tell us through its columns how swarms can be managed so they will build mostly worker-combs, what use to make of any drone-comb that may be built, and which race of bees is best to keep. Why I ask about the comb-matter is, that I do not feel able to buy comb foundation to fill the frames with."

The first requisite toward a newly-hived swarm building all or nearly all worker-comb is, that such swarm have a good queen, one which will keep up with the bees in their comb-building, filling all the cells as fast as built with eggs. With such a queen little if any drone-comb will be built, as a newly-hived swarm has no use for drones that year, especially if they have a good queen.

Drone-comb is built for two purposes: To store honey in, when honey is coming in from the fields very rapidly, so that comb is built faster than the queen occupies the cells with eggs; and for the purpose of rearing drones. But as the bees of a swarm having a good queen need no drones the same year, the swarm arrives at its newly-found home, no drone-comb in which to rear drones for their natural purpose is needed, hence where built by such swarm it is generally built for store-comb, and used for drones the following summer. However, where swarms having queens which have been wintered over build drone-comb, there will be more or less drone-brood reared in it unless the flow of honey is very profuse. At least, such has been my experience. Now if the swarm is a very large one, and the flow of nectar is very profuse at the time such a swarm is hived, if it is put in a 10-frame Langstroth hive, the bees will build comb faster than the best queen ever reared can fill the cells with eggs, and for this reason all practical apiarists know that if worker-comb is to be built, swarms must be under size, or the brood-chamber be reduced in size, this reduction being offset by plenty of surplus room over a queen-excluder.

Years ago, before comb foundation was known, I used either to return a part of a large swarm to the parent hive, or hive the same on 5 frames, with surplus room for 40 pounds of comb honey, if said swarm issued when there was a good flow of nectar from the fields. In either way I succeeded in securing nearly all worker-comb. Where only 5 frames were used, at the end of 10 days these would be filled when the other 5 frames were added, and as the queen was now at her height of egg-laying, these other 5 would be generally filled with worker-comb, especially if the bees succeeded in filling them with comb before any of the brood emerged from the first combs built. Where these last 5 put in were placed in the center of the hive, between those already built, better success was obtained than if placed at the sides. Of course, dummies must be used in place of frames, where a part of those needed to fill the hive are left out.

If those wishing worker-comb built will always bear in mind the using of only enough bees in the brood-chamber so that comb will not be built faster than the queen can supply it with eggs, they will suceeed in accomplishing what they want. Where a large amount of bees are with a queen, and the flow of nectar is very small, these conditions are secured just as well as with a few bees and a large flow of nectar; and nearly as well by giving of a large amount of surplus room and a small brood-chamber with a large force of bees and a large flow of honey. In other words, the *bee-keeper* must learn to adapt everything to the circumstances under which he finds his colonies and locality, together with the season.

In regard to what to do with drone-comb when built, let me give a bit of experience before the advent of comb foundation:

A large swarm was hived in a full hive, with a strip of worker-comb ½ inch wide attached to the underside of each frame as a "starter." At the end of a week the frames were pretty well filled down with comb, one-third, or nearly so, drone or store comb. This was all cut out, and a few days later, on examining again, I found the frames filled with very little drone-comb. What little there was, I cut out again, when the whole set was completed with not more than two or three hundred of the cells being aught but worker-comb. The drone-comb thus obtained, was cut up and fitted into the surplus honey boxes, using, where necessary, melted wax to fasten them. These boxes were placed over a brood-chamber contracted to 5 frames, in which a large swarm was hived, when, at the end of 12 days I had the boxes all filled with the finest lot of honey I had ever seen up to that time, with the 5 frames below completed with comb, every cell of which was of the worker size, each supplied with brood from the egg to fully capped pupæ. In this will be found an illustration how any one can manage independently of foundation.

As to which race of bees it is best to keep, from my point of view and *my* location, there can be only one answer, *the Italians.* Some claim that the blacks will work the best on raspberry and buckwheat bloom, but after the most close watching for a period of 15 years, I failed to find a single instance when, or a single plant or tree upon which, the blacks exceeded the Italians in the least as to nectar-gathering; while at many times the Italians were actually making a gain while the others consumed their stores. For this reason I discarded the blacks entirely, since which, of course, I have had no opportunity to test them.

Before this discarding, to be sure I was right, I sent for queens of the (said to be) large brown bees, and of the industrious grey bee; but a thorough trial of both only proved, as I expected, that each was not different from the black bee of our fathers, a half century ago. Then I tried the Syrians, the Cyprians, the Carniolans and their crosses, together with the much-praised hybrids, produced by the famed breeder of *Apis Americana*, and found none of them equal to what I had been using, taking everything into consideration. During all of this time of trying all of these bees, "a book account" was kept with each colony, and after a term of years a "summing up" was made, which showed the profit made from my sales of honey from my Italians to be enough greater to force me to part with all other races and varieties of bees.

The black bees, at times would show more dark or buckwheat honey than from the Italians; but my experience was that, at the same time this was being done, the Italians were storing more *white* honey from the second crop of red clover than the others got from the buckwheat.

Borodino, N. Y.

Honey Same Price Now as 20 Years Ago

BY A. RICHTER.

Does the gentleman from Donovan, Ill., (page 55) find a home market for all his honey? If so, he does not produce as large a crop as G. M. Doolittle.

Will any one assume that Mr. D. does not care how he puts his honey on the market? I never had the pleasure of examining the honey of either of the gentlemen, but I will wager that any of the large producers, especially Mr. D., markets a better honey than he did 20 years ago. Does he get more for his honey, or *less?* Why? Not because it's a luxury any more than it was 20 years ago, and if it is, all the more reason why the price should advance, for our laborers indulge themselves more today than they did 20 years ago.

If honey is not a food I would like to know what is.

Honey has many substitutes. There's "Karo." So will candle-grease substitute butter if your taste was cultivated in the North Pole region.

Yes, honey is governed by the amount produced, but can any right-minded student of economics cry over-production in honey, or any other commodity, when half our population go hungry and half clothed?

Eggs may not have sold for 40 or 50 cents a dozen in May, but do now, and did sell for 60 cents, hence Mr. Doolittle scores another mark. There were more than 5 bee-keepers to one 20 years ago. What's the result? Each ships his surplus to the commission man in the large cities; he makes the price, because he has no trouble to get all the honey he wants at *his* price; while, on the other hand, he gets what he asks from the small buyer, who cannot afford the time to get in touch with the producer, just as the producer cannot afford the time to get in touch with the consumer. We trust to the middle-man, who, like most human beings—power makes them selfish. To increase their profits they falsely state the product was not in No. 1 condition, or that it sold for less than it did, until "they kill the goose that laid the golden egg." This is the history of the fruit-growers of California; the Michigan grape-growers; and the growers of flowers in Long Island. What was their remedy? *Co-operation!*

Would it not look like waking up to have a National Honey-Producers' Association to make your market, and accept only properly cured, honestly packed honey—the Association stamp to be the guaranty of quality?

An example of the honey-producers' question can be answered by the "dairymen who furnish the Chicago milk and get 2½ cents per quart. The dealers' combine furnishes the selling organization, and gets 7 cents. Naturally dairymen are beginning to ask themselves, Why don't we furnish the selling organization ourselves, since there is where the profit is?"

I scarcely feel it my privilege to enumerate the many successes of co-operation, and take up space in the American Bee Journal, but let the gentleman from Illinois read co-operation in the Michigan grape-belt, in the Saturday Evening Post of Feb. 19, 1910, or go to the nearest library and get the history and workings of the citrus growers' selling organization, of California. These organizations do the advertising, and are able to engage one gifted that way; advertising men are born, not created, and I think the ordinary bee-man would waste his money trying. Of course, there are exceptions, and our friend from Illinois may be the exception.

All our magazines and daily papers are discussing the fact that the leading commodities have advanced 50 percent, and attribute the advance in price to a 50 percent increase of money in circulation, claiming the two factors are intimately related, and commodities advance as money becomes more plentiful; but that does not feed our families, nor clothe the children of the wage-earner, who is the first to suffer in a panic, and the last to benefit when prices advance. They wait for capital to be just, until they can stand it no longer, and it ends in riot. That is how co-operation is worked out in Philadelphia just now; but the man who works among bees long loses all desire to be unjust, selfish, or jealous, and I think could do as well as the California fruit-growers.

When one reads over the bee-literature he fails to find any guarding their knowledge or protecting an idea by a patent. How unlike any other profession or avocation! Can we not be proud when we read, "I cheerfully and freely give the principles in this system to all, hoping and believing that the same will prove as efficient in the hands of others as they have with me?"

White Plains, N. Y.

6.---Bee-Talks for Beginners

BY JIMSON RAGWEED, OF INDIANA.

BEE-FEEDER—SECTIONS AND FOUNDATION.

DEAR UNCLE JIMSON:—Pa wants me to write and ask you what kind of a bee-feeder you would recommend. He also wants to send away for some sections and foundation. Where can he send without the risk of getting "soaked?"

You asked about Oscar. I am sorry to say that Oscar is not very steady. He went to Evansville the other day and they say he went to a picture show and just spent money like dirt. Pa says to send him one of those ate photos.

Truly yours,
FLORENCE RAGWEED.

DEAR FLORENCE:—As to feeders, all of those described in the different supply catalogs have merit, but I prefer an inside feeder, every time, so that no robber-bees will prowl about.

As to where to buy supplies, look over the advertising in your bee-paper, and any of those dealers will be tickled half to death for the privilege of submitting their catalog. Buy from some one near if you can, to save freight. One nice thing about all the bee-papers is that they do not mean to accept advertising from irresponsible parties, and you need not be uneasy about getting "soaked." I send photo by this mail.

Truly,
JIMSON RAGWEED.

EXTRACTED OR COMB HONEY?

MR. RAGWEED:—We have 8 colonies of bees. Which will pay us better, extracted honey or comb honey? We have always produced comb honey, and have no extractor. We could sell either kind, as we know a great many people in Terre Haute. During the winter months I act as clerk in a department store, but in the summer I help on the farm.

Papa sold two hogs last week to a buyer for a beef trust company, and may be we will get a touring car this fall. If we get it we will come up to see your apiary.

Very truly,
(MISS) MARGARET HIGHSHOE.

MISS MARGARET:—I have been told that there is an excellent demand in Terre Haute for honey, and I would think it would be to your interest to keep more bees, with your superior facilities. I have often said that if one has 5 hives of bees it will pay him to own an extractor. It is well to produce both comb and extracted, and even if one specializes on comb honey there are times when an extractor comes in handy. I have always thought that I can control my bees a little better when I produce extracted honey, and I think it nets me more coin, but we must not all produce one kind.

Truly, JIMSON RAGWEED.

LAYING WORKERS.

MR. RAGWEED:—Having seen your name in my bee-paper, I thought I would take the liberty of writing you a few lines. Somehow or other I feel at ease in writing to you, but I hesitate to write to these editors because they are always dressed up so stiff. Not long ago I called on the editor of our weekly Graphic, and he asked me to go to *dinner* with him, and I looked at my watch and it was just 6 o'clock. He meant *supper*.

Well, I have a hive of bees with laying workers, and I would like to know if I can save them, as I can not introduce a queen. If I could find the laying worker, would the bees then accept a queen? I also wish to ask what language is used in Canada? I wrote a letter to a bee-man in Montreal, and I never did get a reply.

Very truly, SEYMOUR BRESTEL.

FRIEND BRESTEL:—If your hives are all uniform you can save those bees by uniting. Take the hive-body containing the laying workers and place it on a good, strong normal colony. Within a few days, or perhaps within an hour, the laying workers will all be destroyed, and after a few days, if you wish increase, you can get a queen and divide the colony, introducing the queen with safety to the new colony. This method is practical, and the only solution that I know for the problem. When workers begin laying there are many of them, and I have caught them in the act of depositing eggs, but after destroying the egg-layer the work continued the same. I believe that every worker-bee is capable of laying eggs if driven to desperation.

As to your latter question, I would refer you to Mr. R. F. Holtermann, of Brantford, Ontario, Canada. He is an exceedingly nice man, and I know he will take pleasure in answering any inquiries.

Yours,
JIMSON KAGWEED.

HOME-MADE HIVES.

FRIEND JIMSON:—I haven't seen you since you had your exhibit of honey at the county fair, and I thought I would write you a few lines. You certainly had a nice exhibit. I believe our county fair is getting to be better than some of the State fairs.

Jimson, I wish to ask you something. I must have some new hives, and do you think I would save anything if I buy the lumber and make the hives myself? I spoke to Jake Peirce about this subject, and he says I will save money by getting my hives at some hive-factory, ready to nail together. I know Jake has made a good deal of money out of his bees, and it beats all how much interest he takes in the business. The last time I saw Jake was in front of your exhibit and wife, and I asked him to go with us to see the sheep, but Jake said he would stay right there all day. Wife and I paid for grand stand privileges in the amphitheater, but we were much surprised to see many sitting down after paying for a *grand stand*. We also took in the snake charmer, and the fat woman, and we thought it about the best we had ever seen, and we have been to Borodino and to Chicago. Write soon.

EDMUND W. CUBSTED.

MR. CUBSTED:—If I could, I would discourage you about getting lumber and making your own hives. I think Jake Peirce is about right on this subject, and I have known several to give it a trial. Whenever I hear of a bee-man making his own hives, I always connect him with slip-shod and hap-hazard methods. In the first place, unless you buy lumber in very large quantities the cost of the lumber alone may equal the cost of ready cut out hives. Hand-made hives can not equal those made by machinery as to accuracy. You may think dealers are asking too much for their hives, but if you will figure everything separate, frames, metal rabbets, nails, section-holders, comb foundation and sections, then add it all up, prices do not seem so high after all.

It will be a great satisfaction to you to have every detail in your yard interchangeable.

Truly yours,
JIMSON RAGWEED.

"The Honey-Money Stories"

This is a 64-page and cover booklet, 5¾ by 8½ inches in size, and printed on enameled paper. It contains a variety of short, bright stories, mixed with facts and interesting items about honey and its use. It has 31 half-tone pictures, mostly of apiaries or apiarian scenes; also 3 bee-songs, namely: "The Hum of the Bees in the Apple-Tree Bloom," and "Buckwheat Cakes and Honey," and "The Bee-Keeper's Lullaby." It ought to be in the hands of every one not familiar with the food-value of honey. Its object is to create a larger demand for honey. It is sent postpaid for 25 cents, but we will mail a single copy as a sample for 15 cents, 5 copies for $1.00, or 10 copies by express for $1.00. A copy with the American Bee Journal one year—both for $1.10. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
Dr. C. C. Miller, Marengo, Ill.
He does not answer bee-keeping questions by mail.

Sowing Buckwheat in Corn

Would it be profitable, at the last cultivation of corn (about July 10 to 15), to sow buckwheat in the corn for bee-pasture? Have any of the readers of the American Bee Journal ever tried it? If so, what were the results? Illinois.

Answer.—I've had no experience in the case, and will leave the question open for others to answer. I know that heartsease growing among corn is of value, and it seems buckwheat might be. If you make the experiment please report. But remember that buckwheat is not always a sure yielder, anyway.

Perhaps Bee-Paralysis

Two of my colonies are killing what seems to be old bees. They turn black, and they drive them out. The brood seems to be all right. I had one colony affected the same way last year that became all right. I would like to know the cause and cure, if any? I have over 100 colonies, but never saw anything like it before. Missouri.

Answer.—The probability is that it is a case of bee-paralysis. The bees are black and shiny from losing their plumage. They come out of the hive and jump around on the ground, generally with bodies somewhat distended, and there is a peculiar trembling motion of the wings. The sound bees appear to pester and drive the sick ones. As far north as you are, it is doubtful if you need pay any attention to it. I've had several cases of the disease, and never did anything for it, and the disease disappeared of itself. Far enough south it becomes a terror, and although many cures have been offered they generally fail to effect a cure. O. O. Poppleton says he cures by sprinkling sulphur over bees and comb.

Too Many Drones

I enclose a sample of dead bees. Our bees (we have only one colony) have not swarmed since we got them, 3 years ago. This spring the colony seemed strong, but a couple of weeks ago the bees began to carry out dead, half-grown young bees in great numbers, and lately they have been killing each other without apparent cause. Can you give a reason or a remedy? California.

Answer.—The dead bees are drones mostly. The yield of honey ceased, the bees superseded their old queen with a young one, or there was some other reason why the bees did not desire to support a lot of useless consumers, and so they drove out the drones and dragged out the drone-brood. There is nothing unusual about it, and nothing for you to do in the case, unless it be to avoid having so many drones in the future; for I suspect that you have an undesirable number of drones in the hive. The remedy is to allow only worker-comb in the hive. When bees are filling the hive with comb, allow nothing but frames filled with full sheets of worker foundation. In the case of a hive already filled with comb that contains a good deal of drone-comb, cut out the drone-comb and fill the vacancies with patches of worker-comb, cutting up, if need be, a frame of worker-comb to supply the patches.

Swarming—Removing Honey

1. How do bees act before they swarm?

2. I would like to know how late in the fall to take off surplus honey, so as to let the bees have time to get their winter stores ready? Minnesota.

Answers.—1. In some cases they hang out in a great cluster on the front of the hive for a day or more before swarming. But this is no very reliable sign, for they may swarm without hanging out at all. The surer way to tell is to look in the hive for queen-cells. A number of these are always built before swarming, and about the time the first one is sealed you may expect a prime swarm to issue, unless weather delays. The queen-cell is sealed about 8 days after the egg is put in the cell. If there is any after-swarming, you may expect the second swarm a week or two after the prime swarm, and if it does not issue within 16 days after the prime swarm you needn't watch any longer. A third swarm may issue about two days after the second swarm.

2. Generally the bees will look out for their winter stores and have enough in the brood-chamber without waiting for you to take off supers. Take supers off as soon as flow ceases, without paying any attention to stores in brood-chamber. But always have on hand extra frames of sealed honey to give to any colony that may be needy, although generally there will be no need of them until the following spring.

A Beginner's Questions

1. Could I make a nucleus hive for about 10 or 15 2-comb nuclei, with bee-tight partitions, with one entrance at the back, then the next one at the front?

2. Would wire-cloth be better for the partition than thin boards?

3. On an average, how long will it take a queen to fill one of these 2-comb nucleus hives with eggs?

4. How many of these 2-comb nuclei will one strong colony take care of with brood and larvæ?

5. How early could I start them?

6. How long does it take for a larva to be capped over after the egg is laid?

7. Why couldn't there be made an incubator to keep the brood warm after it is capped over?

8. Could a beginner use the cell-cup plan of queen-rearing with success?

9. Which would be the best, Root's queen-rearing outfit or swarms?

10. How can I get my queens mated without putting them into a colony.

11. How could I best keep a large number of queens over the winter with only a few colonies?

12. About how many queen-cells does a colony generally start on a prepared frame like you mention in "Forty Years Among the Bees?"

13. If I have some pure drones, how could I get queens mated with them?

14. How long does it generally take a colony to fill a body of 8 frames with sugar syrup for feeding, using comb foundation?

15. Will they fill these bodies before the honey-flow without injuring the colony?

16. Could I rear queens after the flow all right?

17. Could I do it with the cell-cups? Nebraska.

Answers.—1. Yes; but there would be danger of queens entering the wrong entrances.

2. Wire-cloth would be bad.

3. Perhaps a week.

4. If you mean that no queens are to lay in the nuclei, anywhere from 4 to 20, according to how strong you want the nuclei.

5. As soon as clover yields.

6. About 8 days.

7. Lamp nurseries have been in use for years; but not so much now, perhaps, as formerly.

8. He would probably make more or less failures. It's something of a trade to be learned.

9. The beginner would probably get more good queens from swarms.

10. Put them into nuclei.

11. In a suitable cellar you might keep them in nuclei.

12. Anywhere from 10 to 50.

13. Take them to some place 1½ miles distant from other bees. Possibly you might succeed by putting in the cellar the hive containing the young queens and drones, taking it out as soon as other drones have stopped flying, and then feeding so as to induce flight. Mr. Aspinwall has had some success by clipping the wings of his virgins just a little, so they would not fly far from home.

14. I don't know. Perhaps a week.

15. Depends. Feeding so much very early, especially in bad weather, might do much harm. With everything favorable it might in some cases do good.

16. Not so well as in the flow; but with feeding you may succeed.

17. I don't know that the cell-cups would make any difference.

Locating for Bee-Keeping

I have had bees two years. I was led to begin by reading "A B C of Bee Culture," Langstroth's "Hive and Honey-Bee," Cook's "Manual of the Apiary," and Quinby's "New Bee-Keeping," all of which so interested me that I took up bee-keeping as a sort of pastime for the years that may be left to me. I am now 58 years old. Two years ago I got one colony in May, and by winter increased to 5 colonies, which wintered well. Last year I increased from 5 to 19 colonies. I was called from home during September when I should have been feeding for winter. A neighbor's horse broke in and upset 12 hives, killing 2 of my queens. Rain had set in before I fed for winter. I fed by laying combs on their side, and filling from a dipper with perforated bottom. I fed 200 pounds of sugar in this way. The bees never transferred all the sugar, and the hives were damp as a result. From the middle of October to May 1 it rained almost constantly, with occasional sharp frosts. It was a most unusual winter. My bees were all dead in the spring. Nearly every bee-keeper here lost heavily. I have decided that this is not a good country for bees. Both years I wintered the bees on the summer stands. I want to go to a new and favorable location for bee-keeping. I have decided to choose between Southern California and Northern Washington, if the latter is suitable for bee-keeping, it being for other reasons preferable. Can you tell me if Washington is any good as a bee-country, or direct me to any one who knows from actual experience how bees do there? British Columbia.

Answer.—I have no positive knowledge as to how the two places compare, but have an impression that there may not be so much difference but what other things might make Washington the place for you to choose. I leave the question open for any one who knows more than I do about Washington

Why Did the Bees Swarm?

Colony No. 15 was examined on June 10, and the queen-cells destroyed, although there were no eggs in any of them. Then on the 18th they swarmed, with only *eggs* in the queen-cells. What caused them to swarm so previously? Weather was warm, being 92 degrees Fahr. in the shade during the warmest part of the day. The hive was the only 8-frame; we have regular Langstroth frames, painted red, but was shaded, well shaded, too, and some of the other hives had no shade. We use a cover of the Colorado style. Iowa.

Answer.—I don't know. The smaller size of the hive would have something to do with it, and so might the heat. The disposition of the bees may have figured in the case; some bees are much more inclined to swarm than others.

Cleaning Up Unfinished Sections

I would like to learn of a good plan to clean up sections that are unfinished in the fall of the year. That is, I extract all unfinished, but there is more or less honey left in the combs after extracting. When these boxes are stored away or put in supers it leaks down and drips all over, and makes a sticky and dauby mess. I have thought of tiering up supers 12 or 15 high, and let the bees rob out, but as my yard is close to the house and buildings, I do not like to do it, and I don't know which is the better way. I have at present 105 colonies, and expect to increase to 175 this season. I had about 2000 of these sections, and am using them for baits, and find them excellent in starting the bees to work in the supers. New York.

Answer.—I have had much experience in getting the bees to clean up sections in the fall, and have found no better way than to let the bees rob them out. If you pile them up, as you suggest, allow an entrance large enough for a single bee for each 5 or 6 supers. If the bees can get at them more freely, they tear the combs to pieces. With a sufficiently large number to be cleaned out, say something like a super for each colony, you may go to the other extreme and spread them all out so as to let the bees have free access to the whole business at once. I spread the supers about in my shop cellar, and when all are ready I open the door and invite the bees to help themselves. They are protected against rain, and may remain several days until the bees have them thoroughly cleaned out. If you pile them up on top of hives, they will be cleaned up, but the bees are likely to put some of the honey back into the sections. Some one, I think, has reported success by piling supers back of a hive, allowing access by way of the bottom-board without allowing other bees access. I never tried it. I have tried putting them in front, and it was a failure. It might work better behind.

Egg-Laying of the Queen-Bee

Does a queen-bee lay eggs during the night? If so, when does she rest? SUBSCRIBER.

ANSWER.--She surely does lay at night, and there is a lot of work done at night in the hive. I don't know when the queen rests, and couldn't be sworn that she ever rests during her busiest season. I've some idea, however, that she takes short spells of resting at different times through the day and night. But I may be away off, and will be glad to learn from any one who can teach me better.

A Beginner's Questions

1. Do bees gather honey from dandelion and strawberry blossoms?

2. I have 2 colonies of bees, and they are cross. My neighbor has a very quiet colony. Is there any way the queen may be fertilized by my neighbor's drones, if I should use a drone-trap and kill all my drones?

3. What causes water to come out of the bees during the early morning hour?

4. Could all the honey be taken from the bees in the fall, and then feed them with sugar candy? MINNESOTA.

ANSWERS.—1. I don't think bees get much from strawberries, but they get a large amount from dandelions. It comes rather early for surplus, but is of immense value for brood-rearing.

2. If you suppress drones in your own apiary entirely, you may be sure that your virgins will mate with drones from some neighboring apiary.

3. The vapor from the bees condenses on the sides of the hive and runs down in drops.

4. You can use the old-fashioned way of mashing up the combs and straining the honey through a cloth, or you can melt the combs and take off the cake of wax when it cools.

Foundation Splints—Facing Hives—Killing Bees in Buildings

1. I received foundation splints and used them as follows: Boiled them in beeswax, and fastened them with a full sheet of foundation to the top-bar by putting the splints in the opening in the top-bar. Is that the right way, or are they to be put on the foundation starter and let them touch the bottom-bar of the frame?

2. Last year my hives were very heavy in the fall, and the past spring they did not have weight to last them until blossoms came, so I had to feed them and they are doing fine at present. Did they use all the honey, or what was it that made the hives so heavy?

3. Will it be all right to have the bee-hives face to face?

4. I saw an article on page 195, advising to set the new hive on the old stand, and the old close to the new colony. Now if this is done, suppose the queen is lost, or will not come out, which I saw this year (it came out, but went in again), what will become of the bees, and what would you do in a case of that kind?

5. There are a few swarms of bees in a house, and one in the bank building, which are very troublesome. The openings are very small. How can they be killed? IOWA.

ANSWERS.—1. Either way will do—or neither. The object of the splint is not to fasten the foundation either to the top-bar or bottom-bar, but to keep it rigid so there will be no sagging. The foundation must be fastened to the top-bar independently of the splints, and then I fasten the splints into the foundation without paying any attention to whether they touch at the top or the bottom, or lie midway. But didn't you get with the splints a printed slip of instruction telling just how to put them in?

2. Probably there was in the hives all the honey that you supposed. The peculiar season, whose like you never saw before, and probably never will see again, accounted for the consumption of a phenomenally large quantity of honey this spring. Summer weather came in early spring, filling the hives with brood. Then came freezing weather in which the bees could gather nothing, but consumed enormous quantities of honey to keep up the heat of the hive and to support the brood. The experience ought to emphasize the importance of the advice so urgently insisted upon in the American Bee Journal, in season and out of season, that frames of sealed brood should be provided for this summer so as to be on hand next spring to give to any needy colony. Sugar may do for winter stores, but will not take the place of honey in the spring, when it must be used for brood-rearing.

3. Yes; some prefer that position.

4. If there is no queen with the swarm, I would expect it to return to the old hive, just the same as it would if the mother colony had been left on the old stand and the swarm put on a distant stand. If the queen has whole wings, such a thing does not often occur. If she is clipped, she tumbles out on the ground, and may get back into the old hive. It is the business of the bee-keeper to catch her and put her in with the swarm.

5. Try putting in 4 or 5 tablespoonfuls of carbon disulfide (called also bisulphide of carbon.) It must be done at a time when all the bees are in, some sort of crooked funnel being arranged to make the liquid enter the hole, and the hole promptly closed. Have no light near, for fear of an explosion.

Bee-Keeping in Florida—Starting With Bees

1. In the April number of the American Bee Journal you replied to Illinois' question about that East Coast of Florida as a bee-location that you do not know. I am on the West Coast in the southern part of the peninsula. Here we get honey from orange and grape-fruit bloom, from pennyroyal and from both the saw palmetto and the cabbage palmetto. The first comes in February, the next in March, the third in April and May, and the last in July. In addition to that we have some kind of flowers in bloom every day in the year. I judge the bees can get pollen every day. I haven't known this country long enough to be able to say anything about it from practical experience, but I find the woods full of wild bees. There is a good colony in an old cypress tree about 200 yards from where I am writing. I expect to put it into a movable-frame hive shortly. I have several other bee-trees located. No one here uses modern hives. I will be the pioneer. This is a frontier country. I entered a homestead about 60 days ago within 2 miles of this town, and must move on it within 6 months. My idea is to pay expenses with chickens, bees and truck while I develop an orange grove. This is a first-class country for each of these industries. Bees can fly here the year around. There is plenty of pasture for them at all seasons, I think, but I am not sure of a honey-flow after cabbage palmetto next month (July). I am not able to get reliable information as to the fall and winter flowers. My first trip to this section was early last October. I saw no bees then, for I was too busy looking at the citrus fruits with which the groves were so heavily loaded. However, I am almost certain the fall bloom furnishes pollen, if not honey. I used to be an expert with bees, but for about 20 years I have been too busy to work with them. Methods have largely changed since that time. It seems almost a new business to me, and that I must learn it from the bottom up. Yet I think it will not be too hard for one who loves to handle bees. I would like to have 100 colonies next season. Shall I start this summer?

2. If I start this season, shall I work for large increase or go slow? I have plenty of time to devote to the business now?

3. How fast will it be safe to build up when one has no winter problem to face?

4. What is the best way to work for an increase here?

5. The best honey-flow is orange blossoms in February. Would you stimulate brood-rearing in January? If so, how? FLORIDA.

ANSWERS.—1. Better make something of a start this season; even if you have only a few colonies, and then buy more next spring.

2. As you want a rather large number next year, it might be well for you to work mainly for increase this year. Only look out that as the season advances each new colony be made strong enough so that there is no danger of your being caught in the fall with a number of weaklings that will not pull through the winter.

3. I am a little shaky about dates in you locality, and am afraid it is now rather late to do the most increasing. I hardly dare to risk any figures in the case, and it would really be of no practical value to you if I could tell you exactly how many colonies you could have in the fall for each 10 you have now, unless it would be to know how many hives to have ready. But it will be no great harm if you have a few extra hives left over. I can do no better than to repeat the advice that each new colony you make should be so strong at the time it is made that there will be no question about its being safe for winter. For example, suppose that well along in the season each of your colonies has 6 frames of brood, and you divide each one into two parts having 3 frames of brood each. Very likely you would lose most of them before spring, even in your mild climate. But you might be entirely safe to take a frame of brood and bees from each, and put 5 or 6 of these frames in each new hive. Earlier in the season a good rule would be not to reduce any of your old colonies to less than 4 frames of brood by drawing from them, and to let each new one have 4 brood at the start.

4. The answer to this question is indicated in the previous answer. Yet there are many ways in which increase might be made, and your profit will lie in reading up the books and getting well informed on general principles, and then you can tell better the plan of increase that will suit you. If I may be pardoned for that much advertising I may say that "Forty Years Among the Bees" is perhaps more full than any other bee-book in the matter of artificial increase.

5. Very likely you will come off just as well not to do anything at stimulative feeding. If the queen keeps as much brood in the hive as the bees can cover, no amount of feeding will increase the amount of brood, and in some cases it may lessen it. Only when there comes such a time of dearth that brood-rearing ceases, then it may be well to feed so that the queen will not stop laying.

Reports and Experiences

Good Honey Prospects

I hived the first swarm for the season yesterday, May 27. My 32 colonies wintered all right, only one dying. White clover and alsike are just beginning to blossom. The prospects for a honey crop are good.
A. A. AUGENSTEIN.
Dakota, Ill., May 28.

Heavy Loss in Bees

Our bees are just commencing to do well on white clover. The months of April and May were too cold for bees to build up. Over 50 percent of the bees died in this vicinity, due principally to honey-dew. Swarming has not commenced here yet.
(REV.) J. W. STINE.
Sperry, Iowa, June 10.

Bees Rolling in the Honey

Honey is rolling in now; but up to June 8, bees were at the starvation point. This condition was not due to the lack of blossoms, but the weather was such that bees could not be out. Yet it was hardly safe to feed anything but honey, for fear of getting some of it in the section-boxes. H. G. QUIRIN.
Bellevue, Ohio, June 29.

Fine Honey Harvest

Our honey harvest is on, and it is fine so far. The colony on scales gained 56 pounds in 9 days, and might have done better if the bees had had more room, for they were honey-bound. We then put on the third story, and the 2 succeeding days the gain was 12 pounds each day, and the other days 7 and 8 pounds.

This is the best year since 1003, when the highest yield for one day for the colony on scales was 18 pounds.

We are needing rain badly, and yet we have never seen white clover look better.
Clarinda, Iowa, June 27. J. L. STRONG.

Wintering Bees in a Warm Room

On Dec. 16th I transferred a strong colony from a 10-frame hive into an 8-frame glass hive. The change was made out-of-doors; temperature 34 degrees. The bees were all in the new hive in about 20 minutes, when they were taken inside and placed in a south window in a cold room and given a flying-cage 2 feet square, the hive entering the cage at the back, with an entrance out-of-doors through the cage.

On Feb. 19th they were moved into a warm room and given a flying-cage the same as before; temperature of the room 60 to 70 degrees.

March 4th the hive was placed on top of a new circular hive. The bottom-board was removed to give the bees a free passage down through the lower hive and out into the cage.

March 12th the bees with the queen were all smoked down into the lower hive, and the top hive removed. They were given a frame of honey from the original hive, this being placed in the cage. They at once made themselves at home, and began building comb and filling it with honey from the frame.

The hive is made on the plan of a half circle, with glass on all sides. The frames are of standard size, and are placed long side up, and are so arranged that they can be turned around in such a way that each frame stands at right angles to the next one, thus giving an opportunity to see every movement of the bees on the frames.

The frames contained only foundation of different dimensions from none to full sheets. They are now (March 23) working on 6 frames, and have them well filled.

The second day they prepared a brood-nest, and the queen commenced to lay, and continues to do so.

The frames are open from once to many times each day for inspection. This does not appear to disturb the bees in their work.

They are looked over each night, a careful examination and a record being made of the changes during the day.

The bees are hybrid, very black. When outside they were very cross, but since being inside have become gentle, and can be handled almost as safely as flies.

The hive with the brood and stores from which these bees were transferred, was taken to another room and given to a single-frame colony, that has been kept in a warm room since June 14, 1908.

The frames were spread, and the frame with its bees and brood placed in the center of the brood-nest.

The changes have been very successful.

G. T. Whitten.

School of Horticulture, Hartford, Conn.

[We would be pleased to publish further results of Mr. Whitten's experiment with bees.—Editor.]

A Beginner's Good Report

I am a beginner in the bee-business. Two years ago I bought 4 colonies of bees from a neighbor, 3 in light frame dovetailed, and one super for each hive with the shallow extracting frames. One colony was in an old Langstroth hive with 3 supers for sections. Yes, and the best thing of all was Root's "A B C and X Y Z of Bee Culture," which I read very carefully. Then I proceeded to get supplies, which were 6 new 8-frame hives, and 4 shallow supers for each hive. The man I bought them of laughed at me, and said that I wouldn't need so many. But you all know what a bountiful year that 1908 was, and I found I could have used more supers to good advantage before the end of the season. The colony in the hive for sections filled 100 sections. I sold $32 worth of honey, nearly all extracted, as we used nearly all the section honey ourselves, and had 10 good, strong colonies in the fall, and some large frames of honey to slip in in the spring.

I told some of the other bee-keepers how many supers I had for each hive, and they laughed at me, and said I needed only one, and then when it was nearly capped over take it off and extract it and put it back on the hive, and the bees would do better and fill them quicker. But right there is where I kicked. I had heard so many say if they could only get some old-fashioned honey like they used to find in the wild bee-trees, they would like to have it at any price. So that set me to thinking, that if I had supers enough so I could leave it on the hives till it was well ripened, I would have just as good honey as they could get out of their wild-bee trees.

Well, I found that 4 shallow supers were not enough for a year like 1908, but I left my honey on just the same, and lost about 2 weeks of good honey-flow. Well, the other fellows extracted 2 or 3 times, and the markets around home were pretty well filled. I was laughed at, and told that I would have to ship my honey when I extracted. When the honey became good and ripe, I extracted and found it good and thick, with a fine flavor. I filled some 1-quart and 2-quart Mason fruit-jars, and some 5-gallon cans, and was ready for business. That was the first of the week, and on Saturday I got ready to go down town. I commenced to put in some honey, and my wife asked, "What are you going to do with so much?" "Sell it, sure!" And I did. It was 2 miles from town, and I stopped at every farm-house on the road and had them taste my honey, and ended by making a sale and a good customer. I was back home again by noon and had sold $15 worth of honey. Pretty good, I thought.

It wasn't long until we began to get calls by 'phone, and, my! it was gone all too soon. My customers were all ready for 1909, and more with them, but, alas, it was a poor year, but I did pretty well, for I extracted 600 pounds, and increased to 18 colonies. The one in the hive for sections filled 96, which was good for last year. I have neighbors within a quarter of a mile whose bees did not store enough to winter on. I winter my bees on the summer stands. I lost 6 colonies last winter, so have 12 left in fair shape for this season. One of my bee-keeper friends lost 52 out of 55, and he did not get a pound of honey last summer.

We have a fine show for white clover this year, and are hoping for the best.

Barnum, Wis., May 3. R. L. Reed.

Little Bobby's Essay On Bees

The bee is a queer sort of an insect that gives people a few points that they don't appreciate The queen-bee bosses the hive, just like ma bosses our home. The drone-bee is like pa—he don't care much about work. There are other kinds of bees, including political-bees, quilting-bees, and husking-bees. But the best bees of all are the kissing-bees. There is a kissing-bee in our parlor every Sunday night, and I get a nickle not to tell about it. When it comes to the choice of bees, give me a kissing-bee, every time. F. M.

Meredosia, Ills., June 27.

A Texas Report

Bees are doing well here, but it is raining great floods now, ruining the basswood honey crop, and it is hurting the farmer as well as the bee-man.

I secured 1800 pounds of extracted honey in April from 40 colonies. The balance has not been extracted. The honey is very good. Prices I get are 12½ per pound retail, and 10 cents for 300-pound or half-barrels. For basswood I get 12½ cents per pound in 300-pound or half-barrels; 15 cents retail.

This part of Texas is not good for the bee-business. From a single colony 181 pounds is the best I have been able to get in 7 years' business here. J. E. Magee.

Pennington, Tex., May 25.

Securing Foul Brood Laws

I notice, on page 153, the Report of the Secretary of the New Jersey Bee-Keepers' Association concerning the failure to get the Governor's signature to their foul brood law. We bee-keepers in Missouri had the same experience, so I feel I can give some advice. It never occurred to us that after we had worked on both houses of the Legislature, and our bill had passed the committee with their recommendations, then passed both houses, that it would be turned down by the Governor, yet he did so, and it made many sore, and was a bitter disappointment to all of us.

Some time after the Governor had done this, he was in this city to make a speech, when I had occasion to meet him and introduced myself as President of the Missouri State Bee-Keepers' Association. I then explained to him the law we were after aimed at an infectious disease of bees, and that it was not practical to handle it by individuals, but had to be done by experienced men who knew how. I explained that the disease was the same in character, or rather in its results, as glanders in horses, and as he knew that that disease was not curable so far as any one knows, yet foul brood is curable by proper treatment, but is just as fatal as glanders if let alone.

I also showed the Governor that where a colony of bees had died and left honey in the hive, the other bees would rob the hive, and thus carry the disease, and it would spread all around, thus continuing the disease as long as there were any bees to carry the diseased honey. The Governor told me that he had not so understood the case, and that if we would bring such a bill to him again, he would cheerfully sign it, which he did when we got one through 2 years later. So I say to any one in any State working for a foul brood law, to be sure to see the Governor and explain most fully the importance of the bill, and also the importance of the industry, not only as to the benefits of the bee-products, but as to the perhaps greater importance of the aid in fruit-growing.

It is simply impossible to control foul brood without State aid, and a State inspector with the law to back him up so that he can enforce either a cure of the disease or destroy the infected colonies. I know of some bee-keepers now who have written me that they know they have the disease among their bees, but that they do not have the time to work with them, so they were letting them die, and thus keep the disease spreading. If the bee-keepers will not do anything where this trouble is spreading, the inspector should destroy everything that would spread the disease, for what they have is not only of no value in that condition, but is a great menace to others. Hence a law is very much needed to compel some bee-keepers to do the right thing. Understand I am not advocating the destruction of colonies so affected, where they can be and are treated for a cure, but only that those who will not make an effort to cure the colonies so affected, should be compelled to destroy them, so as not to risk infecting others.

I think we in Missouri have one of the best foul brood laws, as the State Board of Agriculture makes the appointment of the inspector on the recommendation of the State Bee-Keepers' Association, and the inspector reports everything he does to the Board. When the time arrived to appoint the inspector, there were 9 applicants for the position, some of whom the members of the State Association had never heard of, and I do not know yet whether some of them were bee-keepers or not, but some of them had a "political pull," and, doubtless, some of them would have secured the position through the influence they had, but for the fact that our Association had something to say about it. These men did not apply to the Association, but direct to the Board.

There is just one point we would like bettered in our law if we could get it, and it is this: We are compelled to go to the Legislature every 2 years to secure an appropriation of funds to carry on the work of inspection. This hazards the appropriation, and it would be a calamity to some of the bee-keepers of Missouri if we should fail to get an appropriation so that the inspector can go on with his work. Our inspector has done most excellent work while he has been at it, but it will take some time yet to get the disease under control.

So I would say to any who are working for a foul brood law, do not forget to see the Governor and thoroughly inform him as to what you want. This will apply also for securing the appropriation.

Mexico, Mo. J. W. Rouse.

White Clover No Good

The white clover season here is no good this year. There seems to be no nectar in the blossoms. Alsike is in abundance, but atmospheric conditions have delayed the crop of honey. I doubt if I could find one pound in my whole apiary of 32 colonies.

Knox, Pa., June 25. Emory E. Beck

Non-Swarming—Fearful Drouth

Mr. Upson see page 200 wants to know if I know of any one using my method of non-swarming, with 8-frame hives. I no not. I do not know of any reason why it would not work with an 8-frame as well as with a 10-frame hive.

We are having a fearful old drouth on our hands. Unless we can get rain soon all prospects of a honey crop will go glimmering. The hives are full of bees, but there is no nectar for them to gather. Honey-dew was abundant, and the bees utilized it for breeding purposes, and are now waiting for something to turn up; and that is just what their owners are doing. Bee-keepers in this locality are not wearing that "smile that won't come off." Dr. H. Jones.

Preston, Minn., June 30.

Some Experiences in Wintering Bees

I would like to call your attention to something that has come to my notice this spring which I consider of interest. It is this:

Last year, in our vicinity, a party had a swarm of bees come off the 3d day of July, and on the 11th the colony sent off another. These were hived in a 10-frame hive on empty combs, and on the top of this was placed another 10-frame hive-body filled with sheets of foundation; on top of this was oilcloth and a thin honey-board, and above that a loose storm-cover. The hive was set up about 2 feet from the ground on a southwest exposure, and the entrance, which was a wide one, over ½ inch, extended the entire width of the 10-frame hive and remained open all winter. They did not get much stores, as you are aware we did not get much honey after that time last year; but, in the fall, the boy in charge gave them 2 quarts of feed with one entrance feeder, and threw 2 or 3 thicknesses of canvas over the top, sides and back of the hive, but the front was generally exposed, and in this way they passed through our 100 days of unbroken winter.

I examined them March 5th, and found them clean and bright, not the least sign of spotting. They seemed to have as many bees as when they were put in last summer, had brood started as large as my hand, and had a good leather-colored queen. Now, the surprise about this is that so small and late swarm could live through so severe a winter in such a large, empty space. Just think of it, 2 big 10-frame hives with nothing in but a little swarm of bees with meager stores, in a single-walled hive! It could not be possible that they could have in any way kept that great cavern warmed up. Some of those cold mornings it must have been down—well, to zero, and it must be possible for the bees to form a crust on the outside of the cluster, as Mr. Doolittle says they can, so that they can maintain the heat of the cluster inside away up, even when it is away down outside of the cluster.

Now, if it is possible for bees to go through such a winter in this big box so exposed in single walls, have we not been going to a great deal of labor and expense which has been worse than useless in packing and putting our bees in double-walled hives? I really believe we have, as the evidence seems to be all against us. I believe that 19 times out of 20 our bees die from being, or getting, stopped up and getting too warm, and, consequently damp, than from being dry and cold. The great mass of our bees have been dying from starvation in our shallow hives—about nine-tenths is the opinion of our best judges—and we have been attributing the loss to the hives instead of the quantity of honey above the bees for them to eat up, sufficient for the long winter and spring if it is a bad one.

Three years ago I bought, in the fall, 4 large, deep hives of bees. They had cases on that were not removed. They had only a thin cover over them, a loose cover above, and little other covering, and the large entrance was wide open; to my surprise they came through all right, and strong, and did far better in every way than the tucked-up bees about them and elsewhere.

Some years ago Mr. Frank Covey told me he bought 5 colonies of bees in tall box-hives that were set on the edges of wide boards, and they had built their combs down below the hives, as there were no bottoms on the hives, and, in this way, they went through that worst winter of the 70's, and they did better the next year than any other bees he had.

My brother told me of a swarm of his that had taken possession of a deserted corn-crib near Bradley, Mich., and had filled it with comb from top to bottom for a space of 10 to 12 feet, and these bees must have passed these winters of the 70's in that way.

I have in mind what was told in one of our bee-books of a lady in lower Canada who had a large box-hive up on a stump with great holes under it, and the hive had been made of green lumber, and had split open, and the bees wintered fine in it in a temperature of lower than 40 degrees below zero.

Therefore, with these evidences before us we must conclude that bees are great cold-resisters if they can be kept dry, that it is next to impossible to freeze them to death, and I think it is also apparent that we have been spending thousands of dollars and enormous labor in constructing double hives and packing, as all of the above instances were in single hives, or had nothing in many places between them and the elements. I think we must also conclude that we have not been careful enough at all times to keep the openings to the hives open, but have allowed them to become clogged within with dead bees, or without with snow and ice. We will have to improvise some way to keep the openings open at all times, so the moisture can escape if we expect to be rid of winter losses; and if we shall expect to have not so many colonies starve we will surely have to leave, in some way, a thicker crust of honey above them to tide them through any season which may come, no matter how severe. J. A. Pearce.

Grand Rapids, Mich., April 10.

Colorado's Honey Crop

The prospects for a honey crop in this locality are certainly very discouraging, while part of the State will have some kind of a crop, the chances are that this locality will have but a very small part.

Denver, Colo., July 6. F. Rauchfuss.

Drouth and the Fall Honey-Flow

Bees have done fine on white clover this year, which has never been more plentiful; but owing to the drouth we are having, it is drying up, and unless we get rain soon the fall flow will be short. Our fall flow comes mostly from heartsease and goldenrod.

Jacob Wirth.

Prophetstown, Ills., July 3.

Prospects for a Fair Crop

Bees are doing good work on red raspberries at present, bringing in about a ton of nectar every day. The prospects are for a fair, average crop if the weather holds out for about two weeks yet.

Ellis E. Pressler.

Williamsport, Pa., June 21.

Hot and Dry Weather

It is hot here, and fearfully dry. We have had no rain in 3 weeks, but the bees have done fairly well the past 15 days, in view of the fewness in numbers caused by their broodless condition during the extreme cold month of May. G. M. Doolittle.

Borodino, N. Y., July 2.

Another Shot at the Hornets

I see on page 194 some remarks by Mr. W. A. Pryal about hornets. I found it impossible in the foothills years ago to mate, or hatch queens in some nuclei, on account of that pestiferous insect. In some localities they are very bad. Tolerate them not.

Oak Park, Cal., June 18. F. Jay Lewis.

Something About Banat Bees

In reply to the questions of "Virginia" and dozens of others in regard to the Banat bees, I will give a description of them for the benefit of all interested in these most excellent bees.

The Banats are a close cousin to the Carniolans, which they very much resemble, and, like the Carniolans, they are prolific and early breeders. They are usually about 2 weeks ahead of the average Italians in getting into the supers in the spring, thus getting a good start made in the supers before the Italians and blacks have begun work.

Where there is an early flow this early breeding is worth much, and costs nothing. The same is true of the Carniolans; but after they are well started in the supers the swarming fever usually sets in, and trouble begins, as they are the worst bees we have to swarm. The Banats are not excessive swarmers, and, like the Italians, are easily controlled, and will stand more crowding than the average Italian.

As to color the Banats are what I would call steel-gray, and every bee the same color. There should be no yellow on them except the queens, which are all shades of color from a black to an orange yellow, but the majority of the queens are dark, and very quiet under manipulation, and usually go on with their duties as if there is no time to spare in romping around over the comb.

The Banats are fine comb-builders, and, like the blacks, are white cappers, and put up the choicest grade of comb honey.

All who have handled the Italians know that they are inclined to fill up the brood-combs with honey, which crowds the queens up into the supers, where no excluders are used, or so reduces the brood that the colonies are weakened and unable to gather much honey later in the season, and go into the winter with few young bees, while the Banats keep up their strength well, and have plenty of young bees for the winter, which means lots of nurse-bees in spring, which is very necessary in producing a strong colony in early spring.

The Banats are long rangers, and to prove this I went down the Arroyo Colorado (which is an arm of the Gulf of Mexico), and made frequent landings to see how far the Banats were working, and found them quite plentiful at 2 miles from home, and at 3 miles there were also quite a number, and at 3½ miles I found very few. There are no other bees in this range, and there were as many blooms near home as there were farther away.

As to temperament, the Banats are the quietest and the easiest handled of all bees. I use smoke only to drive them down out of my way or off the combs. No veil is needed. I have handled Banats 4 years, and during that time I have had Italians, Carniolans, Caucasians, Goldens, and Blacks, all in yards by themselves, and after testing them all together, I have settled on the Banats as the best all-around bees for both business and pleasure. However, I am now stocking an Italian yard to supply the heavy demand for the Italian queens, as many will have no other.

Well, some will say, "He has an ax to grind." I will admit that is true, and I will keep on grinding it until I get it good and sharp, and will chop out this thorny brush and locate more Banat apiaries until I have this wilderness well stocked with the little gray pets

As the readers of the bee-papers know, I am an old queen-breeder, and have a big trade in Banat queens, but I am not the only one. I have letters stating that the Banats we bought of Mr. So-and-So, are the best bees I have ever had, and want to try some of yours. So, there are other men who sell good Banats.

Yes, the Banats are all right, and I believe all who try the pure stock like them, and recommend them to others.

Grant Anderson,

June 20. *The Texas Banat Bee-Crank.*

Sealed Stores for Winter—Black Bees vs. Italians—A Queen-Fight

When I read Mr. Byer's experience in using sealed stores (see Canadian Beedom, February issue), I felt very much as though I would like to be near enough to shake hands with him. Not so much because I agreed with him in the matter of having an abundance of sealed stores in the hive when spring opened, if possible (though in itself this is one of the best factors of success in this locality), but because he had the courage of his convictions thus to come out openly in the face of all the odds against him, and announce his experience, "that for good wintering and for brood-rearing in the spring, under adverse conditions, the Italians are simply 'not in it.'"

I wonder how much difference locality really makes in arriving at opinions regarding the best bee to keep for profit. Now away up here, just south of the North Pole, or, at least, just south of the 47th parallel of latitude, my experience with Italians coincides very nearly with Mr. Byer's. I have tried the Italians in a limited way, having had queens from Texas, Ohio, Pennsylvania and also the non-swarming, non-stinging Golden Adels from Massachusetts, and I found these great swarmers the most vicious to sting of any Italians I had anything to do with, and no better than any of the others for the production of comb honey.

My native bees, no doubt nearly pure black before introducing Italian blood, were gentle to handle, good comb-builders, and in honey-gathering qualities were certainly not inferior to any Italians I ever had.

I have no experience with Carniolans, but I do wish some man who may be situated so he can, would undertake to improve our native bees. When the same time and labor has been spent with them that has been spent with Italians I think we, in the cold latitudes, will all want them.

Bee-keeping with me is only a part of my farming, and I have nearly always had to neglect the bees for other work, and still, with my careless methods, I have had several colonies of blacks that have stored more than 100 pounds of comb honey in 1-pound sections, the largest yield being 120 pounds. This, remember, is in a locality where almost no honey is stored in sections before clover bloom, and rarely any afterward. This makes a very short surplus season. I believe the average yield could be greatly increased over what I get, could I but have the time to spend with the bees.

I have not arrived at these conclusions hastily, as I have been much interested in bees for more than 20 years, and have 125 colonies stored away in their winter quarters at the present time.

I have never produced over 2 tons of honey in one season, so I do not claim that I know it all, by any means.

I want to add that I have never had any high-priced queens, just the dollar kind; this may make all the difference. Now, if there is any other man that can say a good word for the down trodden native, or black bee, let him say on.

In closing, I will give an experience I had with queen-bees a few years ago, as it seems a little out of the ordinary; that is, it was a new experience to me. I had been cutting out queen-cells, and as I worked I laid them on top of a near-by hive. When I had finished my work I noticed one queen had just emerged from her cell. I gathered up all the cells, some 8 or 10, in my hands, and started for the bee-house a few rods away; before reaching it a second queen emerged, and the two were crawling over my hand and the other cells; as they neared each other they made a quick rush and clinched in mortal combat, reminding me very much of two dogs. No serious consequence followed the sharp fight until one seemed to gain the mastery for a moment, when she quickly dispatched her rival by inserting her sting in the neck. The stung queen instantly ceased all effort except for a slight motion of the legs, but lived for several minutes, perhaps 15 or 20, before life was extinct.

While the conflict was in progress the third queen hatched and crawled about my hand and wrist, and then on a block where I laid them. Very soon these came together in the same manner, and after a struggle of the same duration of time, she, in her turn, "got it in the neck," the same queen coming out the victor. As a referee, I at once declared her champion, and returned her to the hive where she remained for some time, at least ready to meet all comers in the arena. I could not see that one queen possessed any advantages over the others, except that the victor was the oldest by perhaps 30 seconds. O. B. GRIFFIN.

Aroostook Co., Maine, March 8.

Knowing When Honey is Ripe

How to tell when honey is ripe has always been a hard question for me to solve, and I think there are others in the same fix. I have read everything I could find, including E. D. Townsend's article in Gleanings, page 307—it was good, but by no means sure—didn't go far enough; then I read Physical Science and learned some more.

I had never seen a hydrometer; didn't even know where to get one; but I had a floating thermometer, and thought of testing honey by comparison, having kept a sample of each year's honey since 1897. I took a 1-pound jar of 1908 honey that I knew was ripe and good, and a 1-pound jar of 1909 that fermented and was as green as I was, when I extracted it. I put the 2 jars in a bucket and warmed them up to 90 degrees, Fahr., then, as the thermometer wasn't heavy enough at the bottom to balance, I punched a hole through a rubber cork and slipped it on the bulb; then it stood straight up when in the honey. Then I tested those 2 jars of honey and it showed a difference of 6 degrees, or 3 marks on the thermometer, which showed beyond a doubt that the 1908 honey was heavier than the 1909 honey.

A small piece of round wood the size of a lead-pencil, with weight enough to make it stand up when put in the honey, will show a difference between ripe and green honey. As simple as this test is, I would never have thought of it if it hadn't been for the mess of green honey extracted in 1909. Lids would pop off the buckets and go to the ceiling, and they would as soon pop off in a store when some one was ordering a bucket as at home; I think they didn't know it was hurting the business, but I did, and I brought them all home, and stopped selling. Now, what do you think of that, and I in the business 19 years? But this was the first time, and will be the last time. But 1909 was very wet and damp. Testing honey by comparison is quite sure, if you have the old honey to compare with the new.

But, having found out this much, the next thing to do was to get a hydrometer. So at the physicians' supply house in Kentucky I got one and tested the specific gravity of alfalfa from southwest Arizona; sage from California; white clover from Illinois; Missouri white clover 1905, 1908 and 1909; added ½ ounce of water to a bottle of honey, and tested that. I made sugar syrup 1 to 1, 2 to 1, and 3 to 1, and tested them. I also tested honey at temperatures of 50, 60, 70 and 90, and labeled each bottle. I will keep them for using in this test.

You should wash and dry the instrument you are using before you change it to the other bottle, so it will be level full when the hydrometer is in. J. F. DIEMER.

Liberty, Mo., Feb. 26.

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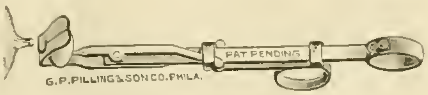
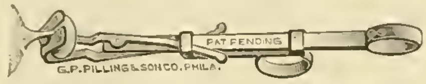
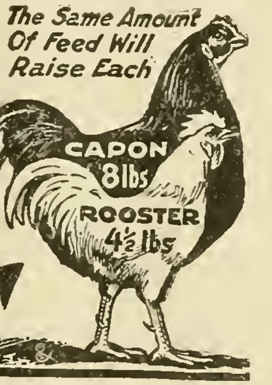
Improvement in Caponizing.—Poultrymen throughout the country are very much interested in the caponizing instrument illustrated herewith on which recently there was issued by the United States patent-office a patent to Geo. P. Pilling & Son Company, of Philadelphia, Pa. With this instrument it is claimed that caponizing is much easier done. The demand for capons is so rapidly increasing that every poultry raiser should caponize all his surplus roosters. It is a well-known fact that capons bring nearly double the price per pound of the uncaponized fowl; also by caponizing the fowl it becomes nearly double in weight.





Caponizing is easily learned by little practice. The beginner must go slow at first and learn it just like the use of any other implement. A professional caponizer in New Jersey operated on nearly sixty thousand fowls last year. People who saw him caponize say that with an assistant he can caponize a fowl in half a minute. This is most unusual, but it is very easy for all to learn how to caponize, and do it in a reasonable time.



We advise all our readers to write to Geo. P. Pilling & Son Company, Philadelphia, Pa., mentioning the American Bee Journal, for their caponizing pamphlet. It will be sent free of charge to all of our readers who request it.

Getting New Subscribers

We believe we are succeeding in publishing a bee-paper that is valuable to every bee-keeper. And so we want very much that every bee-keeper shall subscribe for and read it. Is there a bee-keeping neighbor of yours that does not now receive the American Bee Journal? If so, won't you try to secure his subscription? We will gladly mail free sample copies either to the those desiring to distribute them, or direct to any names and addresses of prospective subscribers that may be sent to us. If you wish to act as an agent, ask for our terms and some sample copies. Address the American Bee Journal, 146 W. Superior St., Chicago Ill.

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Convention at Reynoldsville, Pa.

The bee-keepers of Armstrong, Clarion and Jefferson Counties, Pa., will hold their annual convention at Reynoldsville, Tuesday, Aug. 2, 1910. Hon. S. B. Elliott, Prof. H. A. Surface, Editor E. R. Root, and possibly Dr. Phillips, with others, will take part. All are cordially invited to attend.

A. M. APPLEGATE, *Sec.*

Reynoldsville, Pa.

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National at Albany, Oct. 12-13

A letter from Vice-Pres. W. D. Wright, says that he has made arrangements for holding the next meeting of the National Bee-Keepers' Association at Albany, N. Y., Oct. 12 and 13, 1910, in the Common Council Chamber of the City Hall. Other details will be furnished later. It ought to be a great convention. Will *you* plan to go?

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Souvenir Bee Postal Cards

We have 4 Souvenir Postal Cards of interest to bee-keepers. No. 1 is a Teddy Bear card, with stanza of poetry, a straw bee-hive, a jar and section of honey, etc. It is quite sentimental. No. 2 has the words and music of the song, "The Bee-Keeper's Lullaby;" No. 3, the words and music of "Buckwheat Cakes and Honey;" and No. 4, the words and music of "The Humming of the Bees." We send these cards, postpaid, as follows: 4 cards for 10 cents, 10 cards for 20 cents; or 10 cards with the American Bee Journal one year for $1.10. Send all orders to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.

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"Langstroth on the Honey-Bee"

This is one of the standard books on bees. It tells in a simple, concise manner just how to keep bees. It was originally written by Rev. L. L. Langstroth, who invented the movable-frame hive in 1851. The book has been brought right down to date by Dadant & Sons, than who there are no better or more practical bee-keepers in this or any other country. It contains nearly 600 pages, is fully illustrated, and is bound in cloth. Every topic is clearly and thoroughly explained, so that by following its instructions no one should fail to be successful with bees. Price, postpaid, $1.20; or with the American Bee Journal one year—both for $2.00. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

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The Happy Bee-Man

There was a happy bee-man who gave himself a hug.
For he crossed a nice Italian queen with a big drone lightning-bug.
"So now," he said, "those bees of mine will work with all their might
Not only in the daytime, but through the dreary night."
In dreams he saw the honey-barrels filled right up to the bung:
But when the season ended, the poor old man was "stung."

—*Selected.*

Beedom Boiled Down

Clark's Plan for Requeening

R. F. Holtermann, in Gleanings, reports a highly interesting address on queen-rearing by P. I. Clark of New York State, at the Ontario convention, and says:

> The jewel, set in gold, of his address, in my estimation, was when he gave the simplest method of requeening by putting to one side of the hive a comb of brood, separating it from the rest of the hive by means of a tin which acts as a tight division-board, and which also folds over sufficiently to separate the top of this compartment from the super. In this a capped cell is placed that is within two or three days of hatching. This cell is protected by means of a cell-protector. In this compartment the young queen is fertilized, and at the proper time after the old queen has been removed, the nucleus with the young queen and the full colony are united by means of a small round hole in the tight division-board.

Comb-Honey Carriers Made Too Strong

Mr. Henry Trickey entertains views that are widely at variance with those generally entertained, but, as he presents them, they are at least worth thinking over. The following is from Gleanings in Bee Culture:

> Mr. Trickey produces comb honey; and when we asked him if the distance which he had to ship his product to the market was not quite a problem, he replied, "No, sir. It depends upon the amount of handling which the honey receives as to how much it is damaged, and not upon the distance it is carried. Comb honey may be just as badly broken up in 10 miles as in a thousand, if it is not properly packed and if it is improperly handled by the railroad men. A good many have a wrong notion in regard to the crates or carriers. Bee-keepers often come to me and say that they are going to have the crates made stronger and heavier so as to withstand the hard usage. Now, they say that, because they have not given the matter sufficient thought. A strong, heavy carrier may not be broken up, it is true; but that is just the trouble. The honey in the carrier may be badly damaged; but if the carrier itself has not been hurt, the railroad company will do nothing about it. If we make complaint that our honey was injured in transit, we are only reminded that we did not pack it right, if the carrier itself is still in good thape. I say, then, the carrier *should be just strong* enough to carry the honey through in good shape, provided it is handled properly. Then if it is not handled properly, and the honey is injured, the carrier will be broken also, and the railroad company will have to stand the damage."

A Sure Way of Introducing Queens.

B. F. Dobbs, in Gleanings, gives a plan that not many may care to use on account of the extra trouble, but in some cases where extra safety is desired it may be worth while. He says:

> When the new queen arrives, go to the hive to which you wish to introduce her and take oot two combs of scaled or hatching brood, being sure not to get the old queen. In their places put full sheets of foundation, then over the brood-chamber put a sheet of wire cloth, and set an empty hive-body on top. In this empty hive-body over the brood-chamber put the two combs of sealed brood with the live bees on them, and between the two combs put the caged queen. Make the entrance of the upper body just large enough so that one bee can come out at a time, and be sure that it faces the opposite direction from the entrance of the lower body.
>
> Under the conditions named above, all the old and flying bees will come out and go back to the lower hive, leaving only young bees on the two frames with the queen above. As a rule, these young bees will accept anything in four or five days, and in this time the queen will have been released. She should be left in the upper hive until she is laying, which will probably be by the end of the four or five days.
>
> When the queen is laying in the upper body, set this hive aside temporarily, removing the old queen from the lower hive; then, without putting the wirecloth back, set the upper hive on the lower one again. In 24 hours the queen will be found laying in the lower hive, or at least the two frames in the upper one will be covered with bees, so that the two frames of foundation can be removed from the lower hive and these two upper frames put back. If the queen is found in this upper hive on the two frames, do not touch her, but slip the two frames out and put in the lower hive as quietly as possible, and leave the colony alone for a few days.

Taut Versus Slack Wiring.

Editor Hutchinson protests against slack horizontal wiring with a vehemence that is interesting, and it will be interesting also to see what reply will be made to him by those who direct that horizontal wires must be left slack to allow for sagging. Regarding this he says in his Bee-Keeper's Review:

> That advice is what riles my temper. Put in wires to keep the foundation from sagging; then leave them slack so it *can* sag! Why use the wires at all? Yes, I know what the argument is, that the foundation will buckle if the wires are taut. Well, suppose the wires are put in slack, and then the foundation stretches until this slack is taken up, and the wires begin to support the foundation, *then* what will prevent the foundation from buckling? Yes, I know that there is not much, if any, sagging after the foundation is partly drawn, but the wires did not help any while this stage was being reached.

Pettit Improved Honey-Strainer

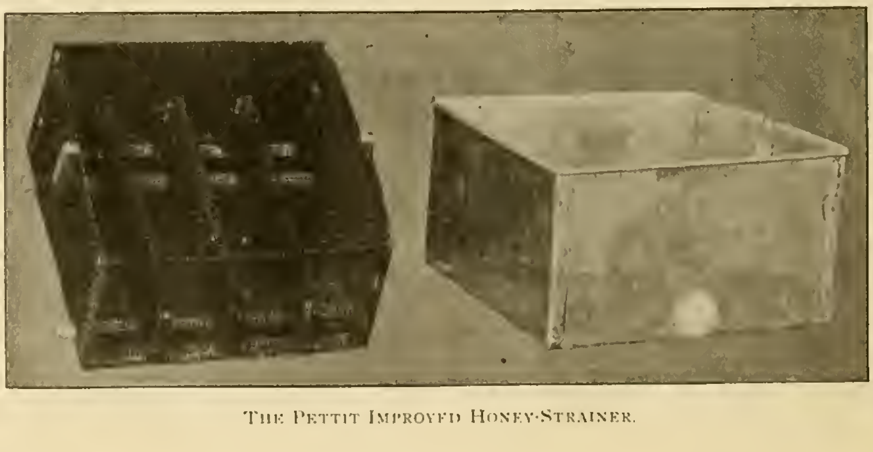
This is described and illustrated in the Bee-Keepers' Review. As heretofore used, honey-strainers of cheese-cloth have been at the bottom, and accumulations of the particles strained out soon make it difficult for the honey to pass through. S. T. Pettit conceived the idea of having the straining chiefly done at the sides. Now he has greatly increased the straining surface in a way that Editor Hutchinson thus describes:

> Perhaps there is no more graphic way of describing this feature than to say that the bottom of the inside wire-cloth vessel has deep *wrinkles* in its upper surface. There are three of these wrinkles or double folds, and they are 5 inches deep; the side-walls being ½ inch apart. As the wire-cloth basket is 15 inches square, these cross-sections add over 3 square feet to the straining surface; and at a point where the pressure is greatest. This feature is decidedly novel, original and valuable. As the strainer is now made square instead of round, and is 8½ inches deep, there are 8 square feet of straining surface; and, as already mentioned, nearly all of it (6½ feet) is *vertical.* The strainer holds about a bushel. The outside box is of tin, 10 inches square and 10 inches deep. There is a large gate at the bottom of the tin can, but this is not shown in the accompanying engraving—simply the hole where the gate is to be placed. Of course, the inside is lined with cheese-cloth; that is, a piece of cloth of the right size is laid in the strainer and nicely folded or fitted to all of the inner parts. Cheese-cloth varies in weight and texture, and care should be taken in its selection. No handles are shown in the cut, but they might be added to the strainer to make it more convenient in handling.

Bees and Fruit.

A very striking illustration of the need of bees in order to the securing of a crop of fruit is given in The British Bee Journal, where Editor Thos. Wm. Cowan says:

> Unfruitfulness may be due to a scarcity of bees. I could mention several instances where orchards bad proved unprofitable until bees were introduced. As a case in point, I can mention that when visiting a friend at Penryn, in California, some years ago, who had 40 acres of "Alexander" peach-trees, which are generally supposed to be shy bearers, he complained that he could hardly get any fruit from them, and was about to cut them down and plant some other variety. It was spring, and the trees were a magnificent sight, being in full bloom. As we were going round I noticed that there were no bees of any sort on the blossoms, and therefore asked my friend how far was the nearest apiary. He told me it was at Newcastle, 5 miles from where we were. I said those bees were no use to him at all, and advised him to give the trees another season's trial, and to get some bees at once, and if then the trees did not bear fruit he could replant in the autumn.
>
> He was an intelligent man, took my advice, and obtained 2 colonies of bees, which he placed in the center of his orchard. Of course, by that time more than half the blossom was over, but for all that he got a fair amount of fruit, the trees nearest the hives having the most on them. This was the first fruit my friend had obtained from his trees, and he was so well pleased that instead of destroying the trees he got more bees.
>
> On visiting him the next year he took me out to see his orchard, which was a perfect sight, and showed the bees' work, for the



The Pettit Improved Honey-Strainer.

trees were so laden with fruit that, although they had been thinned, the branches had to be supported by strong wooden props. Needless to say, there were no further complaints about these "Alexander" peaches being shy bearers, for here was ample proof that only bees were required to make them fruitful.

Bees Go Five Miles for Honey.

C. W. Dayton, in Gleanings, says that in a case where there could be no mistake, he had bees go 4½ to 5 miles to orange-groves, each colony filling one or two comb-honey supers.

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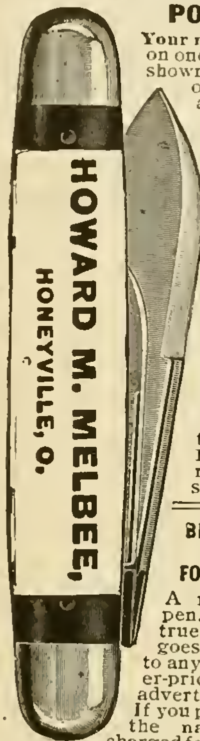

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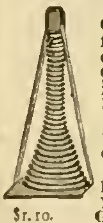

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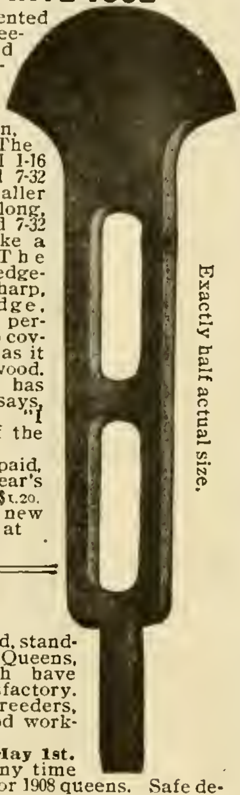

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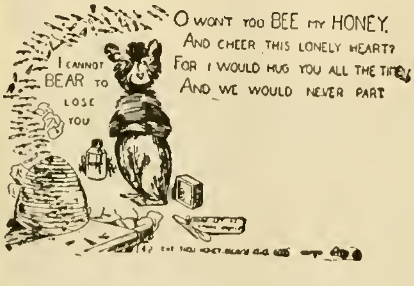
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delivered New York, until further notice.

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New Cans and Cases — Fancy Light, 8 cents a pound; Fancy Amber, 7 cents a pound, f. o. b. New York, in not less than 5-case lots. Will shade prices on larger quantitfes. Shall be glad to send samples.

HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

Worth Many Times Its Price.

To one who takes an interest in honey-bees, the American Bee Journal is worth its price many times over.
Tacoma, Wash. P. A. NORMAN.

Root's Goods in Chicago

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

"Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.
43 N. Brighton Ave., East Orange, N. J.

This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only $1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

Lang, Calif., Sept. 26, 1909.

Gentlemen:—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of of expense. The cost of gasoline and oil used being only 10¢ per ton of honey extracted. It takes the place of a man at $40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here. Truly,
H. A. Slayton.

Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

Our Location and How to Reach It

The A. I. Root Co. 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

New England Bee-keepers! New Stock at Factory Prices

—:PROMPT DELIVERY:—

Cull & Williams Co.
Providence, - Rhode Island.

Golden Virgins 50c

From thoroughbred Italian mothers. Quality and safe arrival guaranteed. A cheap way to build up to a pure stock. Each, 25c.

A. B. FRIEND, Lowell, Ark.

Golden and Red-Clover Queens... From Extra-Selected Mothers

Untested, 75c; six for $4.00.
Selected Untested, $1.00; six for $5.00.
Tested, $1.50.

Safe arrival guaranteed. Twenty-one years' experience. Send your orders to

E. A. Simmons, Greenville, Ala.

Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

W. H. Laws
BEEVILLE, TEX.

Is again ready with his Italian Queens. There is no mistake but the Red-clover Italians are the best bees known. Letters coming in nearly every day verify this claim. Just read this one:

Dear Sir: — The bees from the queens you sent me last spring are breeding finely, gathering honey, and are NOT swarming. If all your reds equal or approach these they are the *best bees in the world*. If you can not fill my order at once that you have bookt I am willing to wait, as I want none but yours. W. LeGette, D.D.S.
Taylorsville, N. C.

I have not dared to advertise until the present, nor reduce prices, as I should be swamped with orders. From the time this ad. reaches you I shall be in a position to fill all orders promptly, but always appreciate a few days' notice before orders are to be filled. PRICES — Single Queen, $1; six for $5.00; Breeders, $5.00.

W. H. Laws, Beeville, Bee Co., Tex.

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

CAPON TOOLS

CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

Italian Bees, Queens and Nuclei

Choice Home-Bred Imported Stock. All Queens reared in Full Colonies.

Prices for July and After

1 Untested Queen.... $0.75
1 Tested " 0.00
1 Select Tested 1.10
1 Breeder Queen 1.65
1-Comb Nucleus (no queen).... .80

Safe arrival guaranteed.

For price on larger quantities. and description of each grade of Queens send for Catalog. Send for sample COMB FOUNDATION. 4Atf

J. L. STRONG,
204 E. Logan St., CLARINDA, IOWA.

PRIZE TAKERS

Pharr's Goldens took first prize at 3 exhibits in Texas in 1907. We will furnish Golden, Carniolan, Caucasian, and 3-band Italian Queens, untested, $1.00 till June 1, then 75 cents. Tested, $1.50 till June 1, then $1.00. For large quantities, write. Our 3-band Breeders from W. O. Victor and Grant Anderson strains; other races from the best obtainable. "Prompt service and satisfaction," is our motto. Address. 5Atf

NEW CENTURY QUEEN-REARING CO.
or JOHN W. PHARR,
Berclair, - - Texas

Again to the Front with
The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to furnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens. each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

NORWOOD'S—Texas-Bred—QUEENS

Three-banded Queen-Bees bred for business. Try them, then you'll know. Untested, $1.00; six, $5.00. Write us.
5Atf **E. B. NORWOOD, Del Valle, Tex.**

Please mention Am. Bee Journal when writing.

"If goods are wanted quick, send to Pouder"
(Established 1889)

BEE-SUPPLIES

Standard hives with latest improvement; Danzenbaker Hives, Sections, Comb Foundation, Extractors, Smokers—in fact, everything used about the bees. My equipment, my stock of goods, the quality of my goods, and my shipping facilities, can not be excelled.

Paper Milk Bottles,

for Extracted Honey. Made of heavy paper and paraffin coated, with tight seal. Every honey-producer will be interested. A descriptive circular free.

Finest **White Clover Honey** on hand at all times.
I buy **Beeswax.** Catalog of supplies free.

Watter S. Pouder, Indianapolis, Ind. **859 Massachusetts Ave.**

HAND-MADE SMOKERS

BINGHAM
OLEAN
BEE SMOKER
Pat'd 1878, '82, '92 & 1903

Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made.........$1.50—4 inch stove
Doctor—cheapest made to use .... 1.10—3½ "
Conqueror—right for most apiaries .... 1.00—3 "
Large—lasts longer than any other........... .90—2½ "
Little Wonder—as its name implies .... .65—2 "

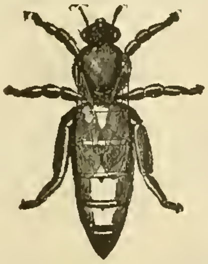
The above prices deliver Smoker at your post-office free. We send circular if requested.

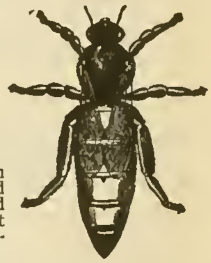
Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.

Patented, May 20, 1879. BEST ON EARTH.

Please mention Am. Bee Journal when writing.





DOOLITTLE'S
"Scientific
Queen-Rearing"

This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., **Chicago, Ill.**

LEWIS BEEWARE — Shipped Promptly

—SEND FOR NEW CATALOG—

Extracted Honey for Sale. (Ask for Prices.)

Beeswax Wanted. 28c Cash—31c Trade.

ARND HONEY & BEE-SUPPLY CO. NOT INC.

(Successors to the York Honey & Bee-Supply Co.) **H. M. ARND, Proprietor.**

148 West Superior St., CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

ROOT'S GOODS

For Pennsylvania

We carry a full line. Send us your orders and we will give you "A Square Deal."

Best Untested Italian Queens, $1.00.
Best Tested Italian Queens, $1.50.

REA BEE AND HONEY CO.,
REYNOLDSVILLE, PA.

Please mention Am. Bee Journal when writing.

Scoggins' Strain of Bees

A Cross of Cyprian and Italians. I have been breeding this strain of bees for 7 years for honey, and they are the best honey-gatherers in the world. I have tried them all. If you want honey, try one of my Queens—75c to $5.00. 6A3t

J. B. SCOGGINS, Fouke, Miller Co., Ark.

Please mention Am. Bee Journal when writing.

ITALIAN QUEENS DIRECT FROM ITALY

——Extensive Apiaries——

E. PENNA, BOLOGNA, ITALY.

I send Queens from May 15 to Sept. 30. In Italy we have only Italian bees, so all my Queens are warranted quite pure and rightly mated. One fertile Queen, $1.40; twelve, $12.00; one Breeding Queen, $3.00. Cash with orders. Queens sent postpaid. Safe arrival guaranteed. 5A1

Please mention Am. Bee Journal when writing.

For Sale

Fine GOLDEN ITALIAN QUEENS from good stock at 50c each. J. F. MICHAEL, Rt. 1, WINCHESTER, IND.

7A3 Please mention the Am. Bee Journal.

Of Interest

FOR the past 50 years New England bee-keepers have purchased Bees, Queens, Bee-hives, Supers, Section-boxes, Comb Foundation, Smokers, Honey-jars, and other necessary bee-supplies, of the Reliable and long-established firm of W. W. Cary & Son.

I have recently purchased the above business, and will continue it at the same place as before. I have been associated with the firm for the past eight years, and have had experience in all branches of the business.

I have a fresh supply of the A. I. Root Co.'s goods, which I am able to supply you upon short notice. Send in your orders early and I will give them my best attention. 4A6t

Send for Bee-Supply Catalog.

EARL M. NICHOLS,
(Successor to W. W. Cary & Son)
Lyonsville, Massachusetts

Please mention Am. Bee Journal when writing.

Write Us To-Day

for our 1910 Catalog and let us tell you all about

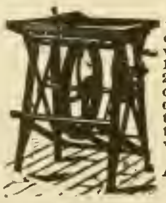
DITTMER'S
COMB FOUNDATION
and
WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line** of **Supplies.** It will pay you, and costs nothing.

RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

BARNES' Foot-Power Machinery



Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. & JOHN BARNES,**
995 Ruby St., Rockford, Ill.

Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 90c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2A9t

S. F. Trego, Swedona, Ills.

CRANE CELLULAR CASES

Mr. H. W. Coley, of Westport, Conn., writes us:

"I am using your Corrugated Paper Cases for shipping comb honey in, this year, and like them. On one shipment last year of six wooden cases packed in a carrier with a straw cushion, the greater part were ruined. This year the same quantity shipped to the same place in your cases went through without a broken comb."

1. The first cost of the Paper Cases is less.
2. He saved the cost of the carriers.
3. He saved the time of making the carriers.
4. He saved the weight of the carriers.
5. The Paper Cases weigh less than wooden ones.
6. They can be assembled in one-half the time it requires to set up a wooden case.

Send for our Circulars and let us tell you what some of the other large producers and dealers say.

Do not take our word for the value of this new Case.

Plan to order early. Some were disappointed last year.

J. E. Crane & Son, Middlebury, Vt.

Honey and Beeswax

CHICAGO, June 28.—At this writing the new crop of 1910 has not put in appearance, but the market is bare, and it is likely to be taken freely. Prospects are for a good yield of nectar at this writing. Prices at present are same as given in last issue. Beeswax is taken upon arrival. R. A. BURNETT & CO.

KANSAS CITY, MO., June 28.—There has been only one shipment of Missouri comb honey on this market so far this season, which sold readily at $3.75 per case of 24 sections; early shipments will sell promptly at this price. White extracted honey selling at 6¾@7c per pound. Beeswax at 22@25c per pound. C. C. CLEMONS PRODUCE CO.

CINCINNATI, June 23.—There is some white comb honey coming in, and is selling rapidly at 16c. There is a good demand for fancy white table honey, and same is bringing from 8@9c, according to quantity. Amber in barrels is selling at 6½c. Beeswax is in fair demand at $33 per 100 pounds. These are our selling prices, not what we are paying.
C. H. W. WEBER & CO.

ZANESVILLE, OHIO, June 30.—The market is practically bare with no arrivals to speak of. Consequently prices are firm and dealers are in a position to get their own prices. Quotations, therefore, would not mean much. The demand for comb is good; for extracted rather light. Beeswax brings the producer first-hand 28c cash, 30@31 in trade.
EDMUND W. PEIRCE.

NEW YORK, June 29.—We are having a good demand for the new crop of comb honey, and are now receiving shipments from the South, which find ready sale at 15c for fancy white, 14c for No. 1, and 12@13c for light amber. No demand for dark. Extracted in fair demand. The new Southern crop is now beginning to arrive quite freely, and common average is selling at from 65@70c a gallon. Better grades at from 6½@7½c a pound, according to quality. California's last year's crop is held firm at from 9@9½c a pound for water white; 8½c for white, and 7@7½c for light amber. Alfalfa 6@6½c. Beeswax steady at 30@31c. HILDRETH & SEGELKEN.

DENVER, June 6.—We have received a little of the new crop of comb honey which sells readily, in a jobbing way, at $3.60 per case for strictly No. 1 white, and $3.45 per case for No. 1 light amber. Also have received a small quantity of last season's crop which sells at $2.25@$2.70 per case, according to condition. We quote strictly No. 1 white extracted honey at 8⅓c; first-class No. 1 light amber at 7½c; and amber and strained at 6¾c. Beeswax, 25c for clean yellow delivered here.
THE COLO. HONEY-PRODUCERS' ASS'N.
F. Rauchfuss, *Mgr.*

INDIANAPOLIS, June 28.—There is a good demand for best grades of honey, but none is now being offered by producers. Dealers are fairly well supplied with one grade of comb, which is fancy white, mostly from Michigan, and 18c is the price asked. Finest white clover extracted is being sold by dealers in cases of two 60-pound cans at 10c per pound. Producers of beeswax are receiving 28c cash, or 30c in exchange for goods.
WALTER S. POUDER.

BOSTON, June 29.—Fancy white comb honey at 17@18c; No. 1, 15@16c. White, extracted, 9@10c; light amber, 7@8c; amber, 6@7c. Beeswax, 32c. BLAKE, LEE CO.

Superior Italian Queens Select Tested from Imported stock sold for $1.25. Satisfaction guaranteed.
I. A. EGENES, Story City, Iowa.

HURT-CAIN CO., Inc., Receivers and Shippers of Comb and Extracted Honey. Refiners of Beeswax.
Consignments Solicited.
We make a specialty of SOUTHERN HONEY.
5A3t **37 Vance Ave., Memphis, Tenn.**

FALCON FOUNDATION

Years of experience in the manufacture of

FALCON COMB FOUNDATION

have made it PERFECT.
Bees like it, and the foremost

Honey-Producers Use It.

It helps materially to increase the

Honey Crop

(Send for our new Catalog.)

Ship us your

BEESWAX

to FALCONER, N. Y.

Will send shipping-tags, when you write asking for quotations.

We pay highest market prices.

W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

SUPERIOR BEE-SUPPLIES

Specially made for Western bee-keepers by G. B. Lewis Co. Sold by
Colorado Honey-Producers' Association,
DENVER, COLO.

June Shipments The month of white clover is here; and at the time we write this announcement the prospect is better for a magnificent flow from clover than we have had for many years.

Many times bee-keepers have been caught with a lack of Sections or Comb Foundation on the eve of a heavy honey-flow, believing that their present stock is large enough, or not knowing what really wonderful flows occasionally occur. When an apiary is in good condition it takes only a moderate number of colonies to store a ton of honey in a single day, and some of the best yields ever recorded have been the result of big flows from clover or basswood lasting a comparatively short time. Do not lose half a ton of honey by being short a thousand sections. It is much better to have a few sections to carry over than to be the loser by not having them.

Sections I handle the best grade of Sections made. If you want a hundred or ten thousand or a hundred thousand, I can fill your order promptly with goods which are bound to please. You may judge of the popularity of the Sections I sell when I tell you that the manufacturers made upward of twenty-five million of them last season.

Foundation There is nothing more important to the up-to-date bee-keeper than to have Foundation just when he needs it, and of the best quality. I sell nothing but Weed-Process Foundation, the recognized standard of the world. The bees appreciate the good points of this Foundation, and every bee-keeper knows that it is best. All grades and sizes constantly on hand. A pound or a ton, just as you like.

Shipping Whether you are ordering in ample season or whether you have put off until the last moment, you may rest assured that our service will give you delivery of goods at a minimum of expense and time. Having so many years' experience in this work, we know the best routes, and we have the best facilities for serving you. Just tell us your needs briefly, and send us definite orders, and we will demonstrate what we can do for you.

Power Honey-Extractors A thirty-two page booklet that has a lot of valuable information for the bee-keeper who produces extracted honey. A copy free on request.

Catalog and price-list of the best bee-supplies made, for the asking.

C. H. W. Weber & Co.

2146 Central Avenue, Cincinnati, Ohio

BEE-KEEPERS OF THE NORTH

BEE-KEEPERS OF THE WEST

Be Sure to get our PRICES on

BEESWAX

Before selling your season's Wax
or
Let us send to you our prices for
Working your Wax into

DADANT'S FOUNDATION

Many large Honey-Producers prefer our Foundation to other makes, because the bees like it best.

We can use almost an unlimited quantity of BEESWAX, and we are buying at all times of the year **at highest cash and trade prices.**

During the season of 1909 we handled over 175,000 pounds of Beeswax.

BEE-SUPPLIES

OF ALL KINDS.

We Keep Only the Best.

**Let us Figure on
Your Season's Supplies**

**1910 CATALOG
Now Ready,
and Free for the Asking.**

DADANT & SONS, Hamilton, Illinois.

BEE-KEEPERS OF THE EAST

BEE-KEEPERS OF THE SOUTH

QUEENS

AND BEES — an improved, superior strain of Italians is what QUIRIN REARS. All yards winter on summer stands with practically no loss. Our stock is hardy, and will ward off brood diseases.

Last spring we sent fifty nuclei to J. D. Nixon, La Farge, Wis., and on July 20th (same year) he wrote us saying they did just splendid, as at that writing they had already filled their supers, and that he would have to extract them. We have files of testimonials similar to the above.

Prices before July 1	1	6	12
Select queens..............	$ 75	$ 4 00	$ 9 00
Tested queens............	1 00	5 00	9 00
Select tested queens.....	1 50	8 00	15 00
Breeders	3 00	15 00	
Golden breeders..........	5 00		
2-comb nuclei, no queen..	2 25	12 00	22 00
3-comb nuclei " "	3 25	18 00	32 00
Full colonies on 8 frames.	5 00	25 00	

All Queens go now By Return Mail.

Add the price of whatever grade of Queen is wanted with Nuclei and Colonies. No order too large and none too small. Will keep 500 to 1000 queens on hand ready to mail. Safe delivery and pure mating guaranteed. Over 20 years a breeder Testimonials and Circular free.

**QUIRIN-THE-QUEEN-BREEDER,
BEL L EVUE, OHIO.**

FINE GOLDEN ITALIAN QUEENS

Only 60c for Untested; one doz. $7.00. Tested $1.00. Select Tested, $1.25.
D. T. GASTER, Rt. 2, Randleman, N. C.

ADVANCED BEE-VEIL

—POSTPAID—
All Cotton, 50c; Silk Face, 60c; All Silk, 90c

Made of Imported French Tulle Veiling; cord arrangement which permits wearer to handle bees in shirt-sleeves with no chance of bees crawling up and under veil. With a hat of fair-size brim to carry veil away from face, you are as secure from stings, movements as free and unrestricted, and as cool and comfortable as you would be at a summer resort.

Please send me two more bee-veils. I have tried all kinds, and yours are best of all.—N. E. FRANCE, Platteville, Wis.

Editorial Comment in Bee-Keepers' Review:—The Advanced Bee-Veil is something I have worn with great comfort the past few weeks. The peculiar feature of the veil is, the edges are held down firmly on the shoulders away from the neck. This does away with all chance of stings, and the hot, suffocating, uncomfortable feeling found in other veils that are tucked in close about the neck.—W. Z. HUTCHINSON.

A. G. Woodman Co., Grand Rapids, Mich.

QUEENS Golden, Red Clover, & 3-Banded QUEENS

Untested, 75 cents each; $4.40 for 6; $8.75 per dozen. Tested, $1.00 each. Queens sent by return mail.
6Atf
DANIEL WURTH, Rt. 1, Wapato, Wash.

§ Caucasians, Carniolans, Banats, Cyprians §

Select untested queens, $1 each; 5 for $4. Imported breeding queens, $5 to $6. Send to original importer and get genuine stock. **FRANK BENTON, Box 17, Washington, D. C.**

For Sale—Old Bee-Papers

Bee-Keeper's Advance, yr. 1887; Bee-Keeper's Magazine, yr. 1887; Bee-Keeper's Guide, yrs. 1887-88; Gleanings, yrs. 1888 to 1894 inclusive; American Bee Journal, 1884 to 1893 inclusive. Best offer takes the lot.
A. J. BUCHANAN, Eldora, Iowa.

Only 25 cents per Case!

60-lb. Empty Tins, two to a case;
used but once—as good as new.

C. H. W. Weber & Co., Cincinnati, Ohio.

AMERICAN BEE JOURNAL

50TH YEAR

No. 8

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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY
GEORGE W. YORK & COMPANY
146 W. Superior Street, Chicago, Ill.

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2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

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"Bees and Honey"

By Thomas G. Newman

bound in cloth, that we offer cheap to close out. It contains 160 pages, and is bound in cloth. It used to be a one-dollar book, but we will mail them, so long as they last, at 50 cents each; or with the American Bee Journal one year—**both for only $1.20.** Surely this is a bargain. The book is well illustrated, and has some good information in it, especially for beginners. Address all orders to

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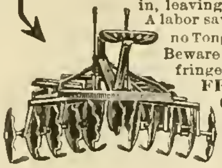

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5A5

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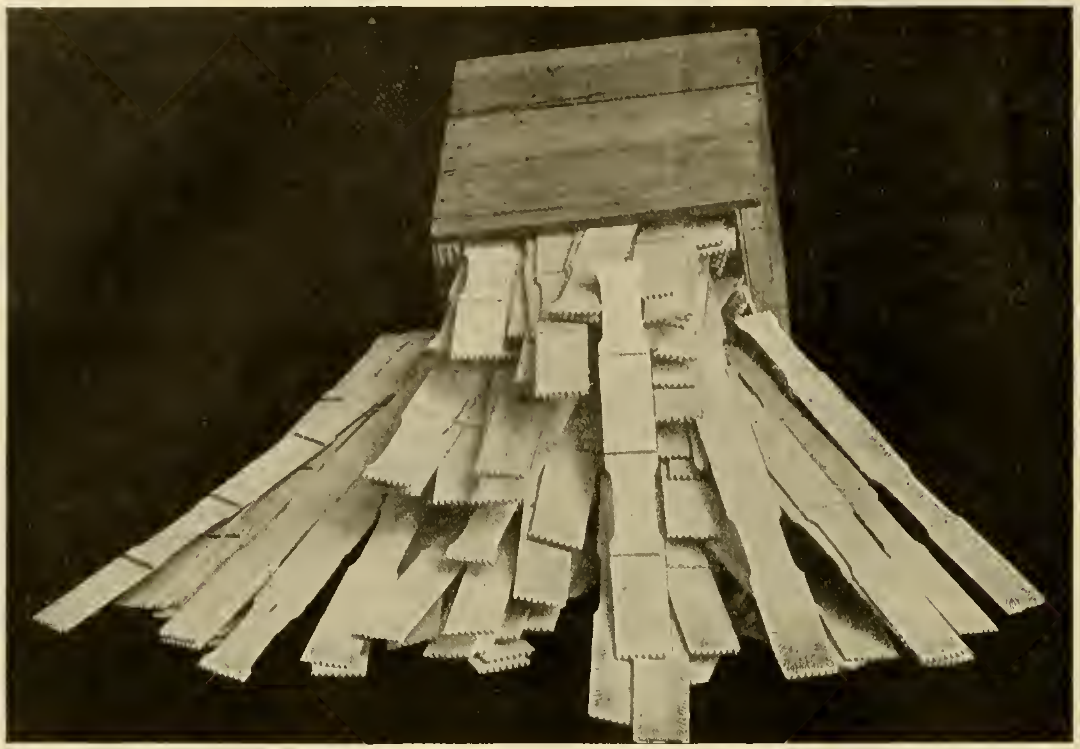

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If you want to get a larger crop of Honey than usual, get **Hall Superior Golden Queens NOW for 1911.** Untested Queens—1 for $1.00; 6 for $5.00; 12 for $9.00. Write us your wants.

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AMERICAN
BEE JOURNAL
L.L. LANGSTROTH
DADANT

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

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DR. C. C. MILLER, Associate Editor.

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Editorial Notes and Comments

The Honey Crop of 1910

It is doubtful if the present generation of bee-keepers will ever experience a year so difficult as the present in which to forecast what is likely to take place with regard to the honey crop. At least this is true of a large portion of the country. Take Northern Illinois. In April colonies were strong enough for the harvest, and with the abundant showing of clover there was every reason to expect a crop. Afterward came a long cold, wet spell, and in the first half of June the bees reached the point of starvation in many cases. Where the bee-keeper was not on the alert, if colonies did not actually starve, they were likely to stop all brood-rearing, making them too weak for the harvest. Then came another sudden change, and although it is almost unbelievable, by the 15th of June second supers were given in some cases where only a week before it was necessary to feed. For perhaps about 3 weeks the flow continued heavy, and the bee-keeper would have said, "There is every prospect that this will be the biggest year we have had." But by July 10th the drouth got in its deadly work, and robbing became the order of the day. Whether in such an unguessable year the flow may start up again, giving finally a full crop, or whether the end has already been reached, with only half a crop, can only be told in the future.

In a good many places the same state of affairs seems to have existed. R. L. Taylor, reporting from Michigan in Gleanings in Bee Culture, graphically expresses it by saying:

> "The bad weather of the last part of May and the first week of June, when the bees pulled out their drones, and in some cases worker-brood, gave honey prospects a black eye."

Gleanings for July 15th publishes 33 reports from different parts of the country. In these there are a dozen complaints of drouth, and 4 of too much wet. A little more than a fourth of the reports are from good to excellent; 15 percent fair; and nearly 60 percent from less than the average to a fifth of a crop.

The Colorado Honey-Producers' Association, Denver, says:

> "The prospects for a honey crop in this locality are certainly very discouraging. While a part of the State will have some kind of a crop, the chances are that this locality will have but a very small part."

Telegraphic dispatches, dated July 12th, gave the following: Washington, D. C., "Very poor crop." Wisconsin, "General reports from one-third to half crop." Fremont, Mich., "Not more than half a crop." Lansing, Mich., "Half a crop." Iowa, "A little below the average." New York, "Fair to medium." Philadelphia, "Twenty percent average." Western Vermont, "One of our best years." Eastern and Central Massachusetts, "Light." Missouri, Arkansas, and Southern States report "a very light crop—below that of last season." Indiana, "The central and northern parts of the State have the best crop that has been taken for years; but the southern part of the State has not done so well." Zanesville, Ohio, "Conditions are the worst I have ever known."

It certainly looks as if honey ought to bring a fair price this year. But in a year of such sudden and remarkable changes, it can only be told later whether the harvest is much below the average or not.

Uncapping Drone-Brood to Prevent Swarming

There is a more or less general belief that the suppression of drone-brood has a tendency to prevent swarming. Certainly it is the regular program for bees to rear drone-brood in preparation for swarming. M. R. Kuehne reports in the Bee-Keepers Review that he thinks bees are dissatisfied if they are not allowed to rear any drone-brood, and so for several years he has allowed each colony to rear some drone-brood, and then he uncaps it. If in sufficient quantity he thinks this prevents swarming.

Very likely uncapping this brood does have its effect in preventing swarming, but it might be hard to prove that it is any more effective than suppressing drones by keeping drone-comb out of the hive. And what proof is there that bees are any more dissatisfied with having no drone-brood than they would be having it slaughtered?

Now a Good Time to Requeen Colonies

In an apiary of any considerable size it will generally be found that some colonies have far outstripped others in the amount of honey stored. Some, indeed, will be found that have done next to nothing, while others have stored ten times as much. And yet too often nothing will be done about it, and the poor colonies will be allowed to continue unmolested. The wise bee-keeper, however, will see that these ne'er-do-wells have their queens changed for those of better stock.

Now that the season is so far advanced that we know which are the good and which are the poor colonies, *it is a good time to requeen* all that do not come up to the mark. Those who have not a well established strain of their own will find this the best time of the year to buy queens, and on more than one account. Prices may be lower than very early, while quality is likely to be better. The change of queens can be made without interfering with the honey crop as it might do earlier.

But the man with only 10 or 20 colonies will be likely to say, "I'd like to have the improvement, but rearing queens is something I've never done, and I can't afford to buy." Let us figure just a little on that. Suppose the average crop is 75 pounds, and that his honey brings 10 cents a pound. If he pays a dollar apiece for queens, it will take 10 pounds of honey to pay for the queen. If the queens he buys are only equal to the average in his yard, he will be out of pocket nothing except the trouble of making the change if he buys a new queen for a colony that produces only 65 pounds. If he gets a new queen for a colony that stores 55 pounds, he is a dollar ahead for his trouble. If he buys a new queen for the colony that stored only 25 pounds, he is $5 to the good.

Nor does the matter end there. A change has been made, not only on the single crop, but it is more or less a permanent thing for future years. The presence in his apiary of those poor queens, with the chance of their drones meeting his young queens will be a constant menace, bringing down the average of his apiary.

We have supposed that the queens bought are only the equal of the average queen in his apiary. In too many cases the average of the apiary is so low that queens bought from a reputable dealer would bring up the yield *away above the present average*. In fact, it is not too much to say that many a bee-keeper could buy 10 or 15 good queens at $5 each and make money by it. But when we get untested queens at a dollar each, or less, he is surely standing in his own light not to make the effort to replace extra-poor queens with those that are at least up to par; and in a number of untested queens he is likely to get some that are extra-good.

Black Bees vs. Italians

That vigorous Scotch writer, D. M. Macdonald, in a paragraph in the British Bee Journal, says:

> "The Italian bee is an excellent bee, but it is not the *best*—at least, in all circumstances, in all localities, and in all countries. At last justice is slowly working towards a fairer view of the subject."

Then referring to the American Bee Journal, he says:

> "'The editor, a great stickler in the past for the pre-eminence of Italians, agrees that over a great part of Europe 'immunity belongs to the blacks rather than to the Italians.'"

As the paragraph is headed "Justice at Last," as Mr. Macdonald says "justice is slowly working towards a fairer view," and in that connection says the editor of this paper was a stickler for Italians *in the past*, it seems clear that Mr. Macdonald believes there has been a change of heart "in this locality" as to the comparative merits of the two kinds of bees. It is not so very strange he should have that view, but it comes from not comprehending the *whole* situation.

That there may be no misunderstanding in the case, it may be well to place here the Article of Belief held here at the present time. It is this: The black bee is *not* an excellent bee. As compared with the Italian, the black bee is not worth the powder to blow it up.

That expresses in brief the view held at the present time. It is the view that has been held in the past, and there is not an iota of diminution of the contempt in which the black bee has always been held.

The point in the case that Mr. Macdonald failed to get is that the two kinds of bees thus spoken of are blacks and Italians as they average *in this country*. As to personal experience, there is no guessing in the case; we *know* that the blacks we have had are greatly inferior to the Italians we have had.

When a man of Mr. Macdonald's candor and intelligence says blacks are as good as, or better than, Italians, his word goes. Only it must not be forgotten that he is talking about bees as he sees them, and not about the bees of this country. Even at that, it is likely that there are black bees and black bees in Great Britain, for there are not wanting bee-keepers there who prefer Italians. Bee-keepers in this country are almost a unit in preferring Italians. On the other hand, they are very much united in Switzerland in preferring blacks.

According to foreign bee-papers, black queens from Swizerland have been sent to this country. It would be interesting if those who have received them would report as to their success here. The American Bee Journal will be glad to publish such reports.

Bees Cleaning Combs with American Foul Brood

Henry Stewart, reporting in Gleanings his experience with foul brood, begins with this rather startling statement:

> "American foul brood can be cured without the loss of a particle of healthy brood or of a single diseased comb, and without interfering materially with the production of honey, a laying queen being on duty at all times."

Early in the season when half or more than half the combs in each hive contain as yet no brood, Mr. Stewart makes 2 colonies exchange combs, putting in No. 1 combs of diseased brood from No. 2, and giving to No. 2 broodless combs from No. 1. Generally No. 2 will be free of the disease.

His second method of treatment may be used at any time with a strong colony in a good flow. Here is the gist of it in Mr. Stewart's own words:

> I prepare a hive with a set of clean combs, or with full sheets of foundation, in either case using a frame containing some honey and a small amount of brood taken from a healthy colony, placed in the center of this newly prepared hive. I next secure the queen and place her upon this frame of brood, and at the same time removing the old hive from its bottom-board, putting the new one on the old stand in its place. As soon as the field-bees have found their queen in her new quarters, I place the honey-board on top, and over it I put the old hive containing the diseased brood. Lastly I put on the cover and then let the hive alone for 2 weeks, at the end of which time it is well to remove any queen-cells that may have been started in the upper hive.
>
> The set of foul-broody combs now becomes an extracting-super, and it should be left until all the brood is hatched and the combs are filled with honey. If the bees need more room, another story in extracting-combs should be added; and when these combs are filled with honey, it matters not how foul they may have been, they are now, together with the honey in the cells, as pure as the purest. As soon the new brood-nests become well stocked with brood they should be examined; and if in any of them foul brood is found, the set of combs above, as soon as all the cells contain honey, may be extracted, the queen placed on them, and the position of the bodies reversed and treated as at the start.

The honey-board mentioned is a "board of solid wood with the exception of a strip of queen-excluding zinc containing two rows of slots lengthwise through the center of the board." The object of this board is "to prevent, as far as possible, the siftings of diseased matter down on the brood-combs below from the diseased combs above."

If, in the foregoing, the word "American" be changed to "European," then it agrees entirely with what Percy Orton and others have done with European foul brood, being more or less a variation of the Alexander treatment. If it can also be applied to American foul brood, it will be worth thousands upon thousands of dollars. But if it is effective in getting the bees to clean out combs affected with foul brood of the American type, then all previous teachings have been incorrect. The regular Alexander treatment gives the bees a better chance to clean out the combs, one would suppose, than Mr. Stewart's treatment. And yet Mr. Alexander protested most earnestly that bees could not clean out combs affected with American foul brood, as the rotten brood was of such a gluey nature that it could not be dug out of the cells. On the other hand, in European foul brood the dead brood dries down in such a state that the bees can remove it.

There is still opportunity for many to try Mr. Stewart's cure the present season, and to settle the question whether bees can, after all, clean the remains of the dead larvæ out of the cells, the disease being American and not European foul brood.

The Anatomy of the Honey-Bee

The United States Department of Agriculture's recent publication, on "The Anatomy of the Honey-Bee" (Bul. 18 Tech. Series, Bureau of Entomology), embodies the results of detailed studies and should prove of value as bringing to bee-keepers reliable information concerning an insect of such great economic importance, and also as furnishing a sound basis in devising new and improved practical manipulations. The subject has been for years the object of study of many careful students; but the popular demand for information has also induced untrained men to write accounts of bee-anatomy containing numerous errors, and illustrated by drawings more artistic than accurate.

All practical manipulations of bees must depend upon an understanding of their behavior and physiology under normal and abnormal circumstances, and this knowledge must rest ultimately on accurate information, as to the structure of the adult bee.

Following a brief introduction the author first gives a chapter on the "General External Structure of Insects," and then taking up the honey-bee he gives a detailed description of the head of the bee and its appendages; the thorax and its appendages; the abdomen, wax-glands, and sting; and alimentary canal and its glands. He discusses the circulatory and respiratory systems, the fat body and the œnocytes, the nervous system and compound eyes, and the reproductive system. The text is profusely illustrated, 57 figures, including a full-page median longitudinal section of the body of a worker-bee, being used, all but 3 of which are new and original, having been prepared by the author with a thorough realization of the need of more accurate illustrations of the organs of the bee, especially of the internal organs.

This bulletin can be secured only from the Superintendent of Documents, Government Printing Office, Washington, D. C., as the Department's supply is by law limited to an edition barely sufficient to furnish libraries and the collaborators of the Department with copies. Price, 20 cents.

Putting Empty Supers On Top

There is a difference of opinion as to giving additional super-room. Some say put the empty super of sections on top in all cases, having supers thus finished more promptly, while others say put the empty super under the partly filled one, so as to encourage prompt beginning of work in it. Perhaps the best way is to do both. While a good flow is on, and there is every prospect of its continuance, one need not hesitate to add a fresh super under the first super when no very great progress has been made in the first. And in addition to this an empty super may be placed on top.

More than one reason may be given for putting this additional empty super on top. It serves as a sort of safety-valve. If the bees, for want of prompt attention, become in the least crowded for room, they can go above and commence work there. If they do not need the room, they can let it alone, and no harm is done. No harm, but some good. For this space above helps to prevent overheating in hot days, and so is a factor in preventing swarming. The bees may do a little preparatory work in this upper super, making it more acceptable to them when it is put under, so that they will commence work in it more promptly. With the best of care it may sometimes happen that a sheet of foundation is not sufficiently fastened in the section. One may not notice it; but let the super be put on next the brood-chamber, and a heavy mass of bees coming suddenly upon it causes the foundation to fall, making a bad mess. If it be first put above, there will be no heavy weight of bees upon it, and the bees will make it their first care to fasten the foundation properly. Even if it should tumble down it will not be so bad in the upper story as in the lower, for in most cases no honey will be in it above as there would be below.

Miscellaneous News-Items

How to Get Public Documents

There is an ever-increasing demand, on the part of the general public, for the publications emanating from the various Government Departments in Washington, D. C., and the fact that in the fiscal year ended June 30, 1910, more than half a million documents were purchased by people from every part of this country, and in foreign lands as well, at a cost of over $87,000, is proof of the assertion that public documents have become a commodity that many thousands of readers are willing to pay for. At the same time the numerous inquiries, addressed to various officials, that are eventually referred to the proper official, indicate that, generally speaking, the public has but a very hazy idea as to how public documents can be obtained, and how their prices may be learned. To impart this information, an inquiry regarding public documents that may be addressed to the *Superintendent of Documents, Government Printing Office, Washington, D. C.*, will meet with prompt and satisfactory attention.

A New "Queen" from Kingston

I am sure that many of the readers of the American Bee Journal will join me in congratulating the senior editor on the successful introduction of a new queen into his beautiful home. If that is a trifle enigmatical to some, let me say that the said editor was so fortunate as to be able to induce Miss Grace Hitchcock, of Kingston, Ill., to become Mrs. George W. York, July 2, 1910, being the exact date of said change of name

But I am also sure that their congratulations can not be so hearty as mine, for not having known Miss Grace as I have, even though a very short acquaintance, they can not know so well what a graceful and gracious personage she is—or was—with every prospect that Mrs. York will be equally graceful and gracious. A mere man may not always be relied on as a good judge in such matters, but in this case the judgment of the mere man is buttressed by the judgment of the female portion of his family—a judgment not to be disputed.

It will not be out of place to congratulate the readers of the "Old Reliable" upon the brighter and better journal they may now expect because of the brighter and better life upon which the senior editor has entered. THE ASSOCIATE EDITOR.

The "senior editor" submits as gracefully as possible under the most gracious circumstances, to the publication of this unsolicited very congratulatory contribution from the junior editor, for the former doesn't wish to incur even the mildest displeasure of said latter junior editor. Suffice it to say, further, that the "new queen" is indeed a treasure; and if the old American Bee Journal isn't "brighter and better" from now on, it won't be from any lack of interest or desire on her part.

Governmet Bulletin on "Bees"

Under the tersely comprehensive title, "Bees," the United States Department of Agriculture has issued Farmers' Bulletin No. 397, as we announced last month. It is written by E. F. Phillips, Ph. D., contains 44 pages, and may be had free by applying to the Secretary of Agriculture, Washington, D. C. The aim of the bulletin is said to be "to give briefly such information as is needed by persons engaged in the keeping of bees, and to answer inquiries such as are frequently received from correspondents of the Department." Of course, the work must be "briefly" given to get it inside 44 pages of rather large print.

Commendable is the following paragraph to warn against illusionment on the part of the would-be bee-keeper:

> It is a mistake, however, to paint only the bright side of the picture, and leave it to the new bee-keeper to discover that there is often another side. Where any financial profit is derived, bee-keeping requires hard work, and work at just the proper time, otherwise the surplus of honey may be diminished or lost. Few lines of work require more study to insure success. In years when the available nectar is limited, surplus honey is secured only by judicious manipulations, and it is only through considerable experience and often by expensive reverses that the bee-keeper is able to manipulate properly to save his crop. Any one can produce honey in seasons of plenty, but these do not come every year in most locations, and it takes a good bee-keeper to make the most of poor years. When, even with the best of manipulations, the crop is a failure through lack of nectar, the bees must be fed to keep them from starvation.

Death of A. J. King

A postal card received from W. A. Pryal, of Oakland, Cal., announced the death of A. J. King, at San Diego, Cal., June 24, 1910, of valvular heart trouble. The April American Bee Journal contains a biographical sketch of Mr. King, who at one time was quite prominent in American beedom.

American Bee Journal in "Australian"

The Australian Bee Bulletin is one of our most valued exchanges. At least 28 percent of the reading matter of the May number is copied from the American Bee Journal. As it is all properly credited, it shows a sincere appreciation of the contents of this Journal. We are glad to have our exchanges copy anything they like from our columns, when given due credit, as the editor of the Australian Bee Bulletin always does.

Foul-Brood Law in Ohio and—Illinois?

Ohio bee-keepers are feeling good over the fact that they have secured their foul-brood law, the Governor being too well informed to veto it. By the time legislative scandals are straightened out in Illinois, possibly there may be something doing in that State in the way of a foul-brood law. The opposition of a very small number of bee-keepers has been held accountable for the failure to secure a law; but it now begins to seem that such opposition may have had very little to do in the case. Bee-keepers had put nothing into the "jack pot," and so were entitled to no consideration! Let us hope that the cleaning up of the rottenness in the Illinois legislature may be so complete that there shall hereafter be no hesitation about passing a law so plainly in the interest of the general good.

Bees Leaving a Honey-House Through an Escape

E. D. Townsend has made a radical departure from the orthodox plan of letting bees leave a honey-house through a bee-escape, and there is so much to commend it that the entire passage from the Bee-Keepers' Review is here given:

> For several years we have been in the habit of stopping up our honey-house bee-escapes during extracting time, then opening them after getting through, thus allowing the bees that were carried in to escape. This worked well as far as the extracting time was concerned, but if there was a particle of a chance for robbers to get into the honey-house, this practice seemed to encourage it. It was noticed that while no robbers would seem to get into the extracting-house during the extracting, soon after the escapes were opened, and bees had gone home loaded with honey, a terrible "to-do" would soon be on; and if there was a particle of a chance, robbers would find their way into the house.
>
> Sometimes the loss of mature bees by entering the honey-house for "stolen sweets," after extracting was over, would be more than all we had carried in on the combs. Knowing this, no bees are allowed to escape from the honey-house of their own volition, but, each night, or, better still, when through extracting at a yard, and the bees are clustered near each window, as at swarming time, the cluster is given a little smoke, then, with the Coggshall brush, the cluster is loosened and allowed to drop into a tin pail, or other receptacle, in which they are carried out into the yard and emptied near some colony weak in bees.
>
> Handled this way, the bees go home loaded with honey, but know nothing about where they got it. This is so late in the day that robbers will not work, and, by morning, things have quieted down to such an extent that extracting may go on without any interfering from robbers. While the plan of carrying out the bees each night will work very well, usually, I recommend the leaving of the bees in the extracting-house until through extracting, when possible.

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Bee-Disease Samples Wanted

We have received the following that should be of great interest to our readers:

> The Bureau of Entomology desires to obtain information concerning the prevalence of brood diseases of bees in all parts of the United States. If either American foul brood or European foul brood occurs in your vicinity, or if there is any disease of the brood which is not understood, we should like to know it.
>
> In view of the fact that these diseases are not always correctly diagnosed, it is very desirable for us to obtain a sample of the brood for bacteriological examination. If there is any disease of the brood in your own apiary, or near you, we shall appreciate it if you will send us a sample.
>
> In order that samples may reach us in good condition, it is desirable that a piece at least 3 inches square be cut from the brood-combs and then kept in a dry place for a day or two before putting in the box to mail. Samples should be sent in tin or wooden boxes. Such a box will be sent on request with franks for mailing so that no postage will be necessary. *Please put your name and address on all samples sent in.* Results of the examinations will be sent out as soon as possible.
>
> This information is desired for the purpose of sending out publications on these diseases to bee-keepers whose bees are in danger from disease, and in helping with the eradication of disease in any way possible. The name of the individual sending the samples is not made known to other bee-keepers in the vicinity. Any information which will aid us in combating these diseases will be appreciated, and will be a benefit to the bee-keeping industry. Your co-operation is requested.
>
> Respectfully, E. F. PHILLIPS,
> *In Charge of Apiculture.*

Address Dr. Phillips, Bureau of Entomology, Department of Agriculture, Washington, D. C.

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Pennsylvania State Convention

The Pennsylvania State Bee-Keepers' Association will hold a convention Sept. 9 and 10, under the auspices of the Philadelphia Bee-Keepers' Association. They will meet in the Philadelphia Commercial Museum, 34th St. below Spruce. Bee-keepers and others interested in bees and honey are cordially invited to attend the sessions. Delegates from the western and northwestern parts of Pennsylvania will be enabled to take advantage of the low rates of fare of the seashore excursion trains to be run Sept. 8th. An interesting and instructive program now in preparation will be mailed when ready to all who apply for same to, A. F. Satterthwait, Secretary of the Pennsylvania Association, Middletown, Pa.; or to, F. Hahman, Secretary of the Philadelphia Association, Frankford Sta., Philadelphia, Pa.

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National Convention at Albany

As announced last month, the 1910 convention of the National Bee-Keepers' Association will be held at Albany, N. Y., Oct. 12th and 13th, in the Common Council Chamber of the City Hall. The Executive Committee are planning for a great meeting. The time is a most favorable one for bee-keepers to get away from home, as their fall work will be pretty much done by that time.

NIAGARA FALLS—A WORLD WONDER YOU OUGHT TO SEE.

The Hotel Kenmore, near the Union Station in Albany, has been selected as headquarters for the convention. The rates for rooms are $1.00 a day and upward; meals, 25 cents, 50 cents, and upward. Rooms can be reserved in advance by writing to the Hotel Kenmore, Albany, N. Y. Of course, no one is required to stop at this Hotel, but we have found that it is always much more pleasant to have as many bee-keepers as possible stay at the same place. The little visits between the sessions are often almost as interesting and profitable as the convention itself. At any rate, the social opportunities of a convention are no small part of the annual gathering of bee-keepers, and these can be best improved if all who can do so will stop under one roof.

We are arranging to assemble a sufficient number of bee-keepers in Chicago, so that a special car may be had from here to Albany over the Lake Shore and Michigan Southern railroad. The train will leave Chicago at 10:30 a.m., Tuesday, Oct. 11, and arrive at Albany the next morning at 9:20 a.m., in time for the first session at 10:30 a.m. The round trip from Chicago will be $28.20, the tickets having a 30-day limit, and include New York City. There will be stop-over privileges, either going or coming, at Toledo, Sandusky, Cleveland, Ashtabula, Erie, Buffalo, Niagara Falls, Rochester, Syracuse, Utica, Schenectady, and Albany The best way will be for all of us to go right through from Chicago to Albany, attend the convention, and then after the convention we can scatter as we please, and return whenever we get ready, within the 30 days. Those who have never seen Niagara Falls will surely want to stop off there when returning. This alone will be worth the cost of the trip, although, of course, the main object is the National convention.

General-Manager France wrote us July 16th as follows: "Book me for your car from Chicago to Albany, in October."

We do not see why a sufficient number of bee-keepers can not be gotten together here in Chicago from the Southwest, West and Northwest parts of our country to make up a large carload. There should be at least 25 or 30 in order to have a special car. Surely, there will be more than that number who will gather in Chicago and be ready to go in the special car. Those who were so fortunate as to attend the Los Angeles and San Antonio conventions, will not forget their trips in the special cars that started out from Chicago. It was a continuous convention on wheels all the way through. There is no reason why the trip to Albany should not be equally enjoyable, although, of course, the distance is not quite so far as to San Antonio. However, the nearly-all-day ride from 10:30 a.m. until bedtime, and then the next morning until 9:20, will surely give abundant opportunity for visiting and having a good time.

Of course, if there are any bee-keepers between here and Albany who desire to join the special car as it stops at their railroad stations, they can do so. All such can learn from their local agents whether the train leaving Chicago at 10:30 a.m., Oct. 11, stops at their stations. If it does not, perhaps they can take a local train to one of the larger cities where it does stop, and in that way join the special car, meet all the bee-keepers, and go with them to Albany.

As soon as those who wish to join this special car will know definitely that they can do so, if they will let us know, we will make the necessary reservations. The sleeping car berth will be $4.50 from Chicago to Albany for two persons, making $2.25 each. Of course, the special car will be a Pullman sleeper, the same as we had when going to San Antonio.

It is important when purchasing your tickets, from whatever point you start, to be sure to see that they read over the Lake Shore and Michigan Southern railroad from Chicago to Albany, or New York City, as the special rate of $28.20 for the round trip ticket includes New York City, if you wish to join the special car company. Those who have never been to that metropolis of the United States will also want to go there for at least a brief visit, if not for a day or two. There may be some, also, who will want to take in Washington, D. C., on this trip; but, of course, that would take an extra ticket from New York City and return.

Now, if there are any questions you would like to ask that are not covered by the foregoing, we will be pleased to to have you write us, when we will give you any information that will be necessary. Let us of the West show our good Eastern friends that we are ready to co-operate with them in making the meeting of the National this year the largest and best in all its illustrious history. This will be the 41st annual convention of the National Association. As it begins its third score of years we ought to make it a good introduction to the other 19 conventions yet to follow.

We are ready *now* to make reservations in the special car for all who desire to attend the convention with us. For same, please address this office, or G. K. Thompson, General Agent of the Lake Shore and Michigan Southern Railway, 180 So. Clark St., Chicago, Ill.

How about it, brother or sister bee-keeper? Will you go?

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Paper Pulp to Plug Hive-Cracks

Here's something from Praktischer Wegweiser: Take old newspapers and put them in boiling water. This makes a stiff dough or putty, easily crowded into any hole or crack, which dries out in a short time and becomes quite solid.

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No Foul Brood in Yakima Co., Wash.

We have received the following from J. B. Ramage, Secretary of the Washington State Bee-Keepers' Association, with the request that we publish it:

In the summer and fall of 1909 there was a report that foul brood existed in an apiary in the neighborhood of North Yakima. In the spring there were additional reports of the same character in the same neighborhood and in other sections. A sample of the so-called foul brood was exhibited at the April meeting of the Washington State Bee-Keepers' Association. Some of the members pronounced it foul brood, while others thought it was not. Judging from the description of "foul brood" from the apicultural authorities, and in view of the fact that the assembled members could not definitely assert that it was "foul brood." Pres. J. W. Thornton requested that two members submit samples from these hives to Dr. Phillips, In charge of Apiculture, at Washington, D. C. One member sent two samples, and the following report was made:

"The two samples of brood No. 1067, which you sent for examination, show no evidence of disease in either case. I certainly hope that European foul brood does not reach you. Truly yours,

E. F. Phillips,
In Charge of Apiculture."

The other sample sent showed a light case of pickled brood. This shows conclusively that foul brood does not exist in this part of the county and State.

At a meeting of the Washington State Bee-Keepers' Association held in June, 1910, the Secretary was instructed to send this report to the bee-papers of the country, in regard to the absence of foul brood, as the report that foul brood may have gained some headway would prevent the growth of the industry in the State. J. B. Ramage, *Sec.*

North Yakima, Wash., July 15.

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Our First-Page Picture Gallery

The following are brief descriptions of the group of illustrations that appear on the front cover page of this number:

No. 1.—A Missouri Apiary

This picture shows some of the bees of the Rose Hill Apiary, owned by O. H. Brooks. It is located in a fine bee-country, in Howell Co., Mo.

Nos. 2 and 5.—Edwin Bert Morris

I am sending two pictures of my son, Edwin Bert Morris, age 4 years. He has absolutely no fear of bees; in fact, will scrape them up by the handful, and is in the bee-yard a great deal of the time with me. He is also familiar with all bee-appliances. I sent him to the shop, telling him to bring me six Danzenbaker fences, and although there were six different kinds of fences there, he brought me the right ones.

Yonkers, N. Y. W. C. Morris.

W. C. Morris, Bert's father, is the general manager of the American Bee Products Company, producers of honey and beeswax, which recently has been incorporated in New York State. In July it was to have established its first apiary of 1000 colonies in Kingston, Jamaica, W. I., and increase as fast as possible to 50,000 colonies. A large bottling plant will be operated in New York City, and the product sold direct to the grocery trade. Agencies have been established in England and Germany. The directors of the company are J. S. Charleson, president, of New York City; A. B. Peters, secretary and treasurer, of Brooklyn, N. Y.; W. C. Morris, of Yonkers, N. Y.; Theodore Hess, of Paterson, N. J.; and Herman Neubert, of Brooklyn, N. Y.

This is a large undertaking in beedom, and will require expert management all along the line in order to make it a success. Although a risky venture, we certainly wish the new company every deserved success.

No. 3.—Mrs. M. C. Samuels and Her Handful of Bees.

I am sending a picture of myself, which is a little odd. I call it the "contrary queen," as it is a small swarm of bees that would not stay with anybody in town. They were hived by two or three people several times before I caught them. I hived them the next forenoon, but out they came full tilt, and I just caught the "little lady" queen and clipped off a wing; then she would not stay in one place at all, so I held her, and all the bees came and settled on my hand. I had a snap shot taken of the bunch, and then put them into the hive, but the bees got up and left the queen, and she died.

Damp Salt Bee-Sting Remedy.

I also wish to give a remedy for bee-stings, as so many do not know what to do when stung, and it is bad for some.

I always take with me a lump of salt and a cup of water when I go to work with the bees. If I get a sting I salt it real heavy. Dampen the salt on the sting. After removing the sting with a sharp knife, apply damp salt at once, and you will hardly know you have been stung. It is so simple and so good that I think every one ought to know of the salt bee-sting cure.

Asher, Okla. (Mrs.) M. C. Samuels.

No. 4.—Tenement Hives of W. L. Spink

I enclose a picture of my tenement hives, which I submit with the hope of drawing out a few comments from the veterans. Several young queens mated successfully from these hives last spring. The first hive on the right contains an Italian queen of last season, which is doing fine. I also have another Italian colony at an out-yard which I increased on the Alexander plan, but as Mr. Alexander failed to instruct us to put a frame of honey below with the queen, I lost about half the bees by starvation, as an unusual honey-dearth came on, and many, having new swarms, found them starved to death. W. L. Spink.

Varysburg, N. Y.

No. 6.—Apiary of Frank Driesbock

I am sending a picture of my bee-yard (myself not included). I started in 1907 with one swarm that I found by the side of the road; they have increased until I now have 14. One remarkable thing is that I have never had a colony to die. Frank Driesbock.

Verona, Wis.

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Honey Crop and Bee-Supplies

Last month we published a few reports from dealers in bee-keepers' supplies. Since then the following have come in:

The Fred W. Muth Co.

Editor American Bee Journal:—The bee-supply and honey-business is everything that can be expected. As the winter losses in this neighborhood amounted to from 75 to

85 percent, this locality had quite a set-back; in fact, it was almost a calamity. Nevertheless, the honey-flow this season has been beyond all expectations; any number of the bee-keepers around here report from 100 to 175 pounds of honey to the colony. The bee-supply business suffered to some extent, owing to the fact that almost every one used the hives they had on hand.

We are receiving many shipments of comb honey just now—it is in good demand, but the price must not get up too *high*, otherwise it will be prohibitive.

Yours truly,
THE FRED W. MUTH CO.
Cincinnati, Ohio, July 27.

Marshfield Mfg. Co.

Our bee-supply trade this season is as good as last season, if not better, in spite of the unfavorable honey crop last season, and the heavy winter losses of bees. One thing this season, we are in a better position to fill orders more promptly.

From reports from most bee-keepers there will be a very light honey crop this season.

MARSHFIELD MFG CO.
Marshfield, Wis., June 30.

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Honey—Selling or Buying?

Have you honey to sell? Then why not offer it through the advertising columns of the American Bee Journal? Do you want to buy honey? Then why not let your want be known through an advertisement in the Bee Journal?

A good many honey producers and buyers are losing by not using the advertising columns of the American Bee Journal. Why not send your advertisement to this office before the end of this month for the September number? The rate is only 15 cents per line, with 14 lines to the inch. About 8 words, on the average, fill one line of space. You might possibly get it into 3 lines, or may be 5 or 6 lines. And by running it from one to 3 times you might sell or buy all the honey you have for sale or want to buy, as the case may be.

A large firm dealing in honey, after running an advertisement in this Journal for 6 times, wrote us: "We are well pleased with results. It pays to advertise." It would doubtless pay you, too. Suppose you try it this fall, and see for yourself. Address, American Bee Journal, 146 W. Superior St., Chicago, Ill.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Swarming—Building a Bee-Cellar

We have moved to the northern part of Wisconsin, and are building a house and barn. We came from Platteville, 300 miles, and our 40 colonies of bees stood the trip well. We have had 4 swarms, but as it was not possible for Mr. White to be in 20 places at once, he could not clip the queens' wings in May, so he destroyed the queen-cells. (I am not sure this is correct, for what I don't know about the "warm-footed" little things would fill several books.) They are working "like mad," and we hope to have some honey soon.

Our object in coming here where the "forest primeval" reigns, was to increase our bee-business, as there is, as a rule, an abundance of white clover, and we have 160 acres of basswood, more or less.

Mr. White is anxious to build the right kind of a bee-cellar. Have you any suggestions? (MRS.) F. P. WHITE.
Angus, Wis., June 29.

Cutting out queen-cells will usually delay swarming, but will not generally prevent it altogether. After they are cut out they will likely be started again, and sometimes the bees are so fierce about swarming that after cells have been cut out the second time they may swarm out in a day or two after. But we count a good deal on it in connection with ventilation clear through the brood-chamber—big opening at the entrance and a small opening at the back end above, with 2-inch space and bottom-rack under the bottom-bars—keeping out drone-brood, giving lots of super-room, and breeding from bees not much inclined to swarm.

Bee-cellars are generally cellars under dwellings, and it is well to have a good depth—8 feet deep or more—and to have the wall above-ground well banked clear to the top of the foundation. In your part of the country these things are important to help keep the cellar warm, for generally cellars in the North are not warm enough. If you could have a steady temperature of about 45 degrees it would be all right Then the cellar must be kept dark, but with sufficient doors and windows so that in warm times in early spring you can open up at night to cool off and air out the cellar. Good air in the cellar is not only important for the bees, but for the people over the cellar, and you must provide for it some way.

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She Knows a Queen-Bee Now

The first year I kept bees I did not know a "king-bee" from a queen, and one day as I was taking sections of honey out of the super, using a dry-goods box turned upside down for a table, and a thin case-knife to pry the honey out of the super, a bee lit near me on the box. I said, "You are a funny looking bee," and pressed on its back with the flat side of the knife. I pressed some eggs out of it. Not for another year did I know that that funny bee was a queen, and as she flew away I supposed she went back to the hive, for I did not see her again. I have learned since to know a "king" from a queen-bee! OHIO BEE-WOMAN.

After you squeezed the eggs out of that "funny bee," if you had followed it up, very likely you would have found that there was a funeral within a short time.

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Colony Swarmed Out and Returned—Feeding Bees in Dry Time

DEAR MISS WILSON:—I have 4 colonies of bees now, one swarm, and bought a large colony in a Wenona hive (or made there). All have been working hard. The last 2 weeks have been very dry and hot. One colony swarmed, or what appeared a swarm, 3 times, but went back again into the hive. What was the trouble? There was one super on it. I thought they were crowded. I put on 2 more supers. I have 2 supers on 2 other colonies. What made them go out and come back again?

Some of our neighbors who have bees have the same trouble. They settled once, and before we could hive them they came back to the hive. I have nice, clean hives, made on the latest plan. I have not any old-fashioned box-hives. I have starters in the frames, full sections, also starters in the sections in the supers.

Ought they to be fed while it is hot and dry? or is there enough for the bees to eat if it is dry?

I read the American Bee Journal closely, and like it very much, but it seems one has to have experience in taking care of bees to learn much. We keep the surroundings very clean. We hived one swarm of bees with a frame of partly filled comb in it from another hive. MRS. E. P. DAY.
Bloomington, Ill., June 22.

It is nothing so very unusual for a swarm to act in the way you describe. Probably the queen will not—more likely can not—go with the swarm; and when the bees of the swarm find there is no queen with them, they return to the hive. Likely there is something wrong with the queen so that she can not fly, but crawls back again into the hive, only to issue again later in the day.

Generally there is no need of feeding when it is hot and dry, but sometimes there is need. If there is lack of stores in the hive, with danger of starving, then feeding is absolutely necessary. Sometimes it is advisable to feed even with plenty of stores in the hive. If the dearth of pasturage continues for a long enough time, brood-rearing may entirely cease. At such a time feeding every day, or every other day, will keep the brood going.

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Little Girl Calls Honey "Bee Jelly"

I heard a good thing yesterday that seems to me worthy of a place in the American Bee Journal. I live in town and keep my bees a mile out on a farm. Recently I took out some honey, and left some at the house for the family. When they were eating dinner a little 3-year-old girl said, "I would like some more *bee-jelly*." Pretty good for a new name for honey.

The dry weather cut clover short, and the season is not a good one.

EDWIN EWELL.
Waseca, Minn., July 18.

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Bee-Brush and Robber-Cloth

A brush is a very convenient thing to have in the apiary, and you will frequently have occasion to use it.

For a permanent brush probably nothing is better than the Coggshall. It is a long and very slim whisk-broom. It looks as if nearly all the broom-corn had been pulled out of it.

A better brush, although not so durable, is one made of something green. This does not seem to irritate the bees as the other brush sometimes does, if they are inclined to be a little touchy. If it were not for the bother and time of making, I know of nothing better. It has this in its favor—it is cheap, and you can always have a brush for the making. Almost any kind of weed will do, although some kinds wilt so soon that they are objectionable. Sweet clover and asparagus are fine; goldenrod and aster make good brushes, and even long grass will do. Be sure to make it big enough. Take a bunch with the handle as big as your wrist, tie it firmly with a string, and you have a good brush that will last all day.

Another thing that will be found

convenient to have in the apiary is a robber-cloth, which is especially used when robber-bees are bothering.

To make this robber-cloth, take ¾ of a yard of heavy cotton-cloth, turn over the selvedge edges, making a hem a little over an inch wide. Put into these hems shot or something that will weigh them down, stitching it in at intervals so that it will not all slide to one place but weigh the cloth down evenly. Now take 4 pieces of lath about the same length as the hive, put the cloth of one side between two pieces of the lath, putting the lath so you will leave the same amount of cloth projecting at each end, and take wire-nails long enough to go through both lath and leave enough to clinch. Drive the nails through the cloth and laths, clinching the nails firmly. Do the same by the other side, and the robber-cloth is ready for use.

By taking hold of the lath on one side you can quickly throw this cloth over any hive that contains either honey or brood, over supers of honey, or any that is exposed to the robber-bees.

We feel that we cannot get along without our robber-cloths, and if you have never tried them I think you will find them useful articles to have in the apiary.

Melting Combs into Beeswax

Sadly I viewed the empty hives of my bees which I had depended upon to furnish me many a new gown this summer—all dead. But I must save what I could of their homes. I saved the straightest combs and hung them in a light, airy place for future use. I washed a phosphate sack clean, and put into it all the crooked combs it would hold. It weighed 6 pounds. I put it into a large brass kettle and filled it half full of soft water. I washed a hoe clean and pressed it down into the water. When I thought all was melted, "John" made a pair of squeezers for me, of two smooth pieces of boards with a door-hinge between. I held the dry end of the sack and John squeezed. We did a very good job. OHIO BEE-WOMAN.

If Mr. Hershiser had the slumgum left after you squeezed out the wax with your boards, doubtless he would find a good deal of wax left in it. But it is not easy by ordinary means to get all the wax out.

Mother Graham's Birthday Celebration

At the beautiful residence of Wm. M. Graham, in Fort Worth, Tex., a dinner was given in honor of Mother Graham, in the celebration of the anniversary of her 80th birthday, June 12, 1910.

In the early 70's the writer made the acquaintance of Wm. R. Graham and family, at Greenville, Tex. Mr. Graham was a brick contractor and builder. He built the present court-house in Greenville, and many other structures now standing in that city. He was also one of the first scientific bee-keepers in the State, and in connection with the writer established the first factory for the making of bee-hives and bee-keepers' supplies in Texas.

In 1877 the State Bee-Keepers' Association was organized in Greenville, and Wm R. Graham was for a number of years its honored president. For nearly 20 years the annual conventions were held at his residence, in the beautiful grove, among the bees of his extensive home apiary. He was loved as a brother by all who knew him. He died 7 years ago, and June 12th a family reunion was held, with mother, children, grand-children, and great grand-children, with a few old friends of the family present. The living members of this family today are mother, 3 sons, 2 daughters, 28 grand-children, and 9 great grand-children. There were present at this reunion: Mrs. Wm. R. Graham, of Greenville; Mrs. H. L. Russell, of Weatherford; Mr. and Mrs. W. M Graham, of Fort Worth; Mr. and Mrs. M. R. Graham, of Fort Worth; Mrs. J. W. Morrow, of Paul's Valley, Okla.; (Mr. John Graham, of Greenville, was not present.) Of the grand-children present were: Mr. and Mrs. Fred Erisman, of Fort Worth, Mrs. Erisman being a daughter of John Graham. W. M. Graham's children are Olin, Ernest, Clifton, Raymon, Vera, Littie, and Aura. M. R. Graham's children are Margaret, Evelin, Aulton, and M R., Jr John Wesley Morrow, son of Mrs. Morrow, of Paul's Valley, Okla. Of the great grand-children only Fred Raymon Erisman was present. The friends of the family present were: Dr. and Mrs. W. R. Howard, Thos. H. Rattan, and little Miss Ella Lonise White, all of Fort Worth.

The dinner was spread in the spacious dining hall of the handsome new mansion. The table was loaded with everything good—such a menu has never before been excelled in the South. There were baked turkey, chicken fried, smothered, fricasseed, baked and stewed; roast beef, roast mutton, baked fish with suitable dressing, fried fish, all sorts of gravies and dressings, fruits, pickles, sauces, salads, tomatoes, jellies, preserves, ice-cream, cakes, sliced pineapples, and many other dishes and delicacies "too numerous to mention."

"MOTHER GRAHAM'S" 80TH BIRTHDAY PARTY.

Many stories and reminiscences of old times were enjoyed. No one seemed happier than Mother Graham. Her children were there to honor her with their presence, her grand-children to do her homage, each striving to do something for grandma; and little Fred, her only great grandson present, seemed to think that the whole occasion was on his account. Four generations were present, and all was enjoyment, happiness and peace.

The photographer ended the festivities by making group pictures. Then the visitors sought Mother Graham, and many nice little speeches were made, wishing her many returns of the occasion, with all its happiness and joy.

Mother Graham is well preserved for one of her age. She can read the finest print without the aid of spectacles. Her hair is as black as in youth, with only here and there a silver thread.

Fort Worth, Tex. W. R. HOWARD, M. D.

Such gatherings as the foregoing are indeed very enjoyable, and are all too rare in this busy, work-a-day world in which we live.

Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ontario, Canada.

Honey Crop Report and Prices

Today (July 22) I have received blanks for honey crop report from Secretary Hodgetts. The committee will meet on Aug. 2, and consider the price to be obtained for the season's output. It is surprising ?—or rather shall I say, gratifying—to notice that each year more and more bee-keepers report, and the great majority wait to hear from the committee before selling their crop. That the work is a great help to the bee-keepers goes without saying, and it is the best thing we have yet had in a step towards more systematic handling of the honey crop.

As to prices, it would be presumptuous for me to make any forecast, but it seems likely that, in view of the short crop, last year's prices will be at least maintained, if not increased.

The National at Albany—A Texas "Chunk Honey" Lunch

So it is settled for good that the next meeting of the National will be held at Albany, N. Y. That is really too bad, when so many of us Canucks wanted to have it in Toronto so as to entice a great number of our cousins to come over the border and see a really fine country. If correct, I believe Albany is somewhere near where the "buckwheaters" live, that we used to read about in the bee-papers a few years ago. Not being partial to buckwheat, it is consoling to know that the distance is not so far from Toronto but that we can take a lunch with us if we should decide to make the trip. Seriously, though, a lot of us would like to have had the meeting in Toronto this year; but instead of being discouraged we will keep a-doing for future favors, although this fall we will be sure to hear, "It's in the East this year; send it West next."

Since writing the foregoing I have had the American Bee Journal in front of me, and happen to notice that it is the intention of our genial secretary, Mr. Scholl, to be at the Albany meeting. That settles it as to the lunch question, as he will be sure to have some Texas "chunk honey" with him, and I will impose on his hospitality for the refreshing of the inner man, if it should be my good fortune to be able to attend the meeting.

Steam-Heated Uncapping-Knife Best

Today we finished extracting our clover honey—all being left on the hives till the season was over. There is just enough basswood honey coming in to keep the bees from robbing, and to make the work pleasant. Five days steady going, handling combs all the time, has made my finger ends so sore that I can hardly strike the keys of the type-writer, yet I suppose we would not object if the work lasted another 5 days.

We have used a steam-heated uncapping-knife for the first time, and Mrs. Byer (who is "uncapper-in-chief" in our honey establishment) says no more cold knives for her. As another user has said, it is a "slick shaver," all right, and saves a lot of muscle. It has the fault of sealing over a few cells of honey with wax now and then, but not as many cells are closed as is often done with a cold knife in thick honey, as the best of operators will occasionally do a little "gumming." The steam-heated knife has come to stay, and my half dozen other honey-knives will not be used much in the future.

Rapid Loss of Old Bees

In speaking of the very backward weather we had the past spring, I am made to say that the cold unseasonable weather lasted right up to May 12th (page 219), while, of course, it should be June 12th.

In the same item the writer promised to say more next month about the bees being in none too good condition at the opening of the flow—said flow of honey being heavy only a few days at the start of bloom and then very indifferent afterwards. I have already said that the bees were not ready for the flow at the start, so it is needless to say that our crop from clover is very light—about 35 pounds per colony, whereas last year it was over 100, and nearly all of it gathered in about 10 days.

Now the interesting and unsolved roblem about the matter, in so far as pts scribe is concerned, is as tohiu what caused our old bees to drop out of sight just at such a critical time after they had been so very populous all spring. Numerous writers have been saying that during the cold weather their bees stopped brood-rearing, but this was not the case with us, as nearly all colonies were jammed with brood with the opening of the flow, but there was not enough old bees to care for this brood and still have a big field-force to spare. The scarcity of field-bees was only for about 10 days, but after that the clover yielded very poorly.

While we have had many theories advanced as to the loss of the bees, the only one I accept is the fact of the bees being bare of honey from early spring, as was the case with 75 percent of the bees in Ontario this past season. Against my will I had to feed sugar syrup to most of the colonies, and while they never were short of unsealed stores, yet all colonies so treated were in poor shape at the opening of the flow, while some 40 that had enough honey, and were not fed a drop of syrup, came up to the harvest in rousing shape, and stored more honey in the same apiary than twice their number of sister colonies that had been fed sugar syrup all spring. For winter food, sugar is all right, but for spring—well, that is a different story, and I would rather have 20 pounds of honey in the hives on May 1st than 40 pounds of syrup to be fed regularly with no honey present in the hives.

As I have said, previous to June 12th the weather was very unseasonable, and I have an idea that the old bees were lost in a vain attempt to get pollen, as sugar syrup, as we all know, is no good alone for brood-rearing. I have always been opposed to spring feeding, and it is needless to say last spring did not make me any more favorable to the practice. It is common to hear about sealed stores being in the hive, and the bees failing to uncap and use it for brood-rearing. However that may be with others, it is not so with *my* bees—probably because of a good deal of Carniolan blood among them; but whatever the reason, I know from actual experience that if I have an abundance of sealed stores in the hive in early spring, my bees always come into the harvest boiling over and ready for the first honey that may come along—and this without my having to do a bit of feeding.

Last spring the honey was absent, and so now is a good part of the crop of honey which should have been secured from the clover this year. Basswood has been yielding a bit the last few days—the first in 8 years, so it is indeed quite a novelty for us to get a taste of the honey again. Prospects are real good for buckwheat—the first smell of which was noticed today (July 22). With a big acreage of this plant this year, and with the bees in splendid condition, we are thinking that perhaps our main crop will be after Aug. 1st—quite a change from only 5 or 6 years ago, when a field of buckwheat was quite a curiosity in our neighborhood. Fighting bad weeds explains this, as the farmers can work the ground well up till July, and then have a crop afterwards.

Drone-Comb for Extracting-Supers

Every once in a while some one will advocate the use of drone-combs for extracting-supers. This advice is surely a delusion and a snare, as the writer has found out to his sorrow. The most of my bees, through force of circumstances, have been bought from others, and as a matter of course in their original shape there was a lot of drone-comb in the brood-chambers. As long as this was the case, drone-comb in the supers made little difference, but when I gradually got most of the drone-comb out of the brood-chambers, and then gave the drone-comb supers, what a change was noticed!

A few years ago I had our super-combs badly filled with pollen in an off season, and the following winter I cut out semi-circles of the combs where the pollen was, and allowed the bees next spring to fill up these holes—with drone-comb, of course. A foolish thing to do, but then I didn't know any better, and only got wise in the matter by hard experience the following summer, when the bees would absolutely refuse to store honey in these drone semi-circles, even when crowded for room—they seemed to think that drones were to be reared, and lacking accommodation in the brood-nest, they expected the queen to come and occupy this nice center of the extracting-super.

This summer I have had a number of cases like this, and when the drone-comb was removed and substituted with a worker-comb, the latter would be filled with honey at once. I tested the matter in a number of cases like this, and every time the result was the same. Practical demonstrations like this are, in my judgment, worth a whole lot of theories, and I certainly shall try to get rid of a lot of my drone super-combs as fast as possible. For the buckwheat flow there is not much difference, if any, in the matter of drone or worker combs, for at the time of the year that the buckwheat blooms, drones are a bit out of season, so to speak, and the bees will then just as readily store in drone-comb as they will in worker-comb.

"The Honey-Money Stories"

This is a 64-page and cover booklet, 5¾ by 8½ inches in size, and printed on enameled paper. It contains a variety of short, bright stories, mixed with facts and interesting items about honey and its use. It has 31 half-tone pictures, mostly of apiaries or apiarian scenes; also 3 bee-songs, namely: "The Hum of the Bees in the Apple-Tree Bloom," and "Buckwheat Cakes and Honey," and "The Bee-Keeper's Lullaby." It ought to be in the hands of every one not familiar with the food-value of honey. Its object is to create a larger demand for honey. It is sent postpaid for 25 cents, but we will mail a single copy as a sample for 15 cents, 5 copies for 60 cents, or 10 copies by express for $1.00. A copy with the American Bee Journal one year—both for $1.10. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

The Texas Bee-Keepers' Association

I have received the following program which will be taken up at the next meeting of the Texas State Bee-Keepers' Association, which will be held at College Station, Tex., during the meeting of the Texas Farmers' Congress, July 26, 27 and 28, 1910. This will be a big event at the College, and it is hoped that there will be a large attendance from all parts of the State. The program is as follows:

Roll call.
Prayer—Rev. W. A. Sampey.
Appointment of committees.
Reception of members.
President's Address.
"Systematizing the Membership of the Association"—W. T. Childress and Louis H. Scholl.
"The Necessary Qualifications of the Beginner in the Bee-Business"—F. L. Aten and D. C. Milam.
"Queens, Honey, or Bees—Which Pays the Best?"—W. H. Laws and W. O. Victor.
"The General Habits of the Honey-Bee"—C. B. Bankston and Ernest E. Scholl.
"The Hive Best Adapted for All Purposes"—Willie Atchley and Jno. W. Pharr.
"The Progress of Bee-Keeping in Our State as Compared with Other States"—Louis H. Scholl and L. R. Dockery.
"How to Create and Maintain a Uniform Honey Market"—O. P. Hyde and W. W. Mayfield.
"Supplies for the Apiary—What I Recommend and Why?"—Udo Toepperwein and W. H. White.
"Is it Profitable for the Honey-Producer to Rear His Own Queens?"—Grant Anderson and J. W. Taylor.
"Out-Apiaries and their Management"—J. B. King and W. C. Collier.
"The Comparative Merits of the Deep and Shallow, and the 8 and 10 Frame Hives"—J. M. Hagood and W. C. Conrads.
"The Best Methods of Artificial Increase"—T. P. Robinson and W. H. Laws.
"Does a Man Have to Know How to Rear Good Queens to Be a Successful Honey-Producer?"—W. O. Victor and F. L. Aten.
Reports of committees.
Election of officers.
Adjournment.
Note.—The Question-Box at close of each session.

Honey-Dew—Laying Workers, Etc.

We have had the heaviest "honey-dew" flow ever known in this part of the State. We have tons of the stuff. What are we to do with the black stuff?

Laying Workers!

So Mr. Latham thinks that laying workers are not so common as some would have us think. He seems to believe much of the work done by supposed laying workers is done by undersized queens. "Allen," you are wrong. (See Gleanings, page 345.)

Much Swarming.

This has been a great year for swarming in this part of the State. Bees have swarmed and re-swarmed, and kept up swarming with the result that those of us who have out-apiaries have lost more swarms than usual.

Introducing Queens.

This may not be new, but I will state it for the benefit of those that are interested. I find that queens that have been laying for only 2 or 3 days are very much harder to introduce than those that have been laying for some time.

When Bees Gnaw Combs.

I don't like to hold opposite views in apiculture with such men as J. E. Crane, of Vermont, but if he believes the bees in Vermont gnaw combs "just because they want to," and rebuild it with drone-comb, I am almost *positive* he is mistaken. Bees gnaw down combs from two causes, and rebuild with drone-comb: Defective combs, and want of wax when no honey is being gathered. No, Mr. Crane, bees don't gnaw down combs in Texas "just because they want to," and rebuild with drone-comb. (Gleanings, page 378.)

One of Scholl's Assistants Ready to Take Supers Off.—See page 254.

Delays of Goods Ordered.

I wish there was some way to compel bee-supply dealers not to accept orders for supplies unless they could, or would, fill them in a reasonable length of time. I have had heavy losses for two years in succession because I could not get my honey cans ordered from 2 to 3 months before needed each year. This was not caused from delay in transit, but because they were not shipped.

The Drouth and Honey-Dew.

We are in the midst of another serious drouth in our portion of the "Lone Star" State, and if we don't have rain immediately our crop of light honey will be very short. The drouth, though, is favorable for the honey-dew, of which we already have a large crop—very much more than we want. If any one knows where we could find a market for the stuff I would be pleased to hear from him. It's almost as black as ink, and the flavor is anything but good. Such is honey-dew in Texas.

"Real" and "Insect" Honey-Dew.

D. M. Macdonald, of Banff, Scotland, seems to favor the belief that there is a *real* honey-dew (June 15th, Gleanings, page 388). The subject is a rather deep one for an uneducated person to deal with, like the writer, but it would take more evidence than has been yet furnished to convince me that the so-called honey-dew is anything but the *excretion* of insects, and *never a secretion* of the leaves of trees. Of course, we have some plants that have nectar-glands, such as the cotton-plant, cow-peas, etc., that secrete nectar; but could this be called "honey-dew?" I think not.

L. B. Smith.

Rescue, Tex., June 23.

Bulk-Comb Honey Production

We have already produced, up to this time, 18,000 to 20,000 pounds of bulk-comb honey for our spring and early summer crop. This was unusual, as, in the localities where our apiaries are, we do not *usually* "figure" on a spring crop, but *depend* upon our *main* crop from cotton and other sources later in the summer and fall. We have a spring crop every few years, however, and when we do it is just that much in addition to the main crop, since one does not depend upon another. That is to say, we can more safely figure on our summer and fall crop, no matter whether we have a spring crop or not. If our crop yet to come equals our average we have obtained year after year, we may safely figure on more than twice as much more of bulk-comb honey than we have already obtained.

Now, it must be explained that nearly all of the above has been comb honey only, without the extracted honey added to it to make "bulk-comb honey." Since we have produced, comparatively, only a very small amount of extracted honey, we have had to resort to buying this with which to pack the comb honey. Consequently we have bought over 25,000 pounds of extracted honey, of which the greater portion has already been used for the above purpose. This brings our output (not entirely our own production altogether) up to quite a large figure.

The bees are in fine condition and are at work mainly in cotton-fields now. The prospects from this source are very favorable. It must be considered, however, that our bees have not been managed entirely for a honey crop, in which case a much better showing would have resulted. Instead, most of our apiaries were run for increase, the majority having been increased 50 percent and more, and the honey crop was "just taken along as a side-line." The reason of our extensive increase each year is because we have to about double our output each year to meet the increasing demand for our product—"bulk comb honey."

Scholl's Favorite for Bulk-Comb Honey—the Divisible Hive.

Four years ago, 7000 pounds was our largest output up to that time, and we thought it an enormously big crop (for an enthusiastic, young, extensive bee-keeper, of course). The following year it was 20,000 pounds, and the demand far exceeded the supply. This was followed by over 51,000 pounds last year, with a demand over the supply amounting to 6 or 7 carloads more. What the total output will be this year we can not yet say, but we have more than doubled our number of colonies by increase and buying, that we had last year.

This only shows how one can grow into a business, and, also, *that bulk-comb honey production is a success.*

How Bulk-Comb Honey Production Looks in the Apiaries

The accompanying pictures will give the reader an idea of how it looks to have a large crop of bulk-comb honey "stacked up" on the hives in the apiaries. These "snaps" were taken at different times and in different places, just before the first supers were being removed. Several of the yards, where the honey-flow was the best, averaged 6 supers to the hive of finished product. At one of the yards all the honey was left on until after the honey-flow, and it was a sight worth seeing. While a few colonies only had 2 and 3 supers on them, the greater part averaged 6 supers, and many 7, while some had 8 supers. The yard averaged 180 pounds per colony of all comb honey, which sold at an average of 12 cents per pound.

You will notice that the divisible-brood-chamber hives, and the same kind of shallow supers, are in evidence in all the pictures. This is not only my favorite, but it is the best hive and super arrangement that I know of for bulk-comb honey production.

The outside of the hives look well enough in the pictures, especially if you can draw on your imagination a bit as to what *might* be inside of those "stacks!"

Next month I'll show you the inside.

Contributed Articles

The Strange Season of 1910

BY HON. EUGENE SECOR.

Was it Isaac Watts who wrote something like the following lines—a poem more familiar to the last generation than to this hurrying, scurrying age?

> Judge not the Lord by feeble sense,
> But trust him for his grace;
> Behind a frowning cloud he hides
> An ever-smiling face.

At any rate, that fact has been again demonstrated this very season. What looked like the blackness of despair has been turned to golden fruition so far as bee-keepers in this bailiwick is concerned.

This has been an abnormal year. Nothing like it is remembered by the oldest inhabitant.

Nineteen-ten will long be referred to as a freaky season, and I reckon that in the next generation fathers will regale their children with stories of the olden time when March and April changed places, and when the apple-blossoms were frozen as stiff as wax flowers; when pie-plant a foot high lopped over and gave up the ghost; when box-elders, white elms, and soft maples were caught flinging their banners to the breeze, inviting to the feast the bees; when the willows, cottonwoods and all the hardy race of early-leafing shrubs and perennials put out their tender shoots early in April, just as though Jack Frost had gone out of business, shaven off his beard, put on light underwear, and had gone off on his summer vacation!

But you can't always tell what that captivating maiden called "Sunny Alberta" has up her sleeve. She's a coquette. She likes to make us believe she loves us when she's flirting with the other fellow. When we had taken her at her word and had donned our most beautiful garments, she turned the cold shoulder, and with a countenance that froze the very marrow in our bones she said she never loved us. Worse than that, she let loose the cohorts of her lover Frost King, and tried to compass our ruin. The battle was short but furious. Dead hopes lay thick upon the field. We cried out in our childish way, "The day is lost! Everything is gone!"

The basswood's tender shoots shriveled and fell, and even the hardy clover leaves wilted and looked like the blackened corpses of their former selves. Apples, plums and cherries were in full bloom, or had started fruit, and the bees had been reveling in unseasonable luxury. But instead of elysian beauty the wreckage of heaven lay about us like a pall after the blast from the regions of perpetual snow.

A Bunch of Scholl's Stacks of Delicious Sweetness.

What fools we mortals be! How short-sighted is the mortal vision? In 30 days Nature had mercifully covered up the dead by a new growth that looked fresher and greener than the first. Many plants—grapes for example—put out blossoms and formed fruit on the second growth. Strawberries, though discouraged at first, matured quite a good crop from late blossoms. Basswood bloomed quite profusely, and, what is better, is yielding nectar. We are now in the midst of the linden harvest, and the perfume cheers the bee-keeper's heart.

A Profitable Corner in One of Scholl's Apiaries.—See page 254.

The best crop of white clover honey has been secured that we have had for many years. Supers are piled three and four high on the best colonies. We have the finest honey ever put up by those matchless alchemists—the bees.

The season has been hot since the middle of May, with little rain, but everything is looking well.

Many bees were in poor condition in the spring, and where not fed the loss was heavy. The owners of such are not bragging. It is another instance in proof of the wisdom of keeping the pitcher right side up, even if it doesn't rain honey.

Forest City, Iowa, July 15.

Ripening Section Honey

BY G. M. DOOLITTLE.

A correspondent writes me that he prefers not to shake the bees all off his section honey, but desires quite a few left on, when he puts the surplus in the box under the cloth, to rid the same of bees; for before they come up on the cloth to get out each bee fills itself with honey, and this honey is always the thin honey in the unsealed cells which are around the outer margin of the sections. And the more of this margin honey the bees take out the better, as it saves its dripping out from these few outside unsealed cells when scraping the sections and putting them in the cases for market.

These words carried me back to the time when I used to store section honey in a room on the north side of the house, as I then thought that the cooler honey was kept the better. But I found by thus keeping the honey in the few unsealed cells next the section, which many colonies insist in leaving without capping, kept thin, and the longer the honey staid thus stored before it was gotten ready for market, the thinner it became, until often, by the time I cased it, a section could not be turned upon its side without this thin honey dropping out and daubing everything upon which it fell. From this I thought I had struck a bright idea, when I told all the bee-keepers who visited me that all sections should be kept right side up at all times if we would keep things tidy and slick and inviting about our product. Of course, the *apiarist* could do this; but how about the merchant who bought it' and the consumer?

For several years I sold my honey to the same merchant, and I well remember taking a sample section of snow-white honey to him, and the first thing he did was to turn the section down flat in his hand, as his eyes looked admiringly upon it; but said gaze was only momentary, for the honey from the unsealed cells, which I had been so careful to keep in place, was dripping down between his fingers, which caused a feeling other than admiration to come over him. I then gave him a lesson in handling honey, and never afterward did I see him handle honey except in an upright position. But however well a few could do this, the great mass were sure to do just the thing my merchant first did, so that the many would become disgusted with the "dauby stuff," even if the bee-keepers and the merchant did not.

After studying on the matter for some time, I chanced to see Mr. Betsinger, who had been brought up among the bee-keepers living about "Father Quinby," and while there I went to see his honey, which was kept in a small building a few rods from any other, the same being only about 8 feet high, and having a rusty tin roof on it. As we went in I remarked about the great heat inside. He told me that this was as he desired, for this great heat ripened his honey so that it was thick, never sweat or turned of that watery appearance so often seen when honey was stored in a cool or damp place; and best of all, it never leaked so as to daub things.

Acting upon what he had said, he picked up a section which had been in the room 10 days, or such a matter, and turned it over backwards and forwards and top side down, then laid it flat down on a table and left it. After looking over the honey all I cared for, we came back to the table, when I picked up the section and there was not a particle of drip about it or on the table. As I remarked on how nice such a condition was, he picked up one he had brought from the hives an hour or or two before I came, when upon going through the same proceedings, it not only "leaked" in handling, but dripped several drops on the table. I now saw what was the remedy for my trouble, for up to this time I had always kept my honey in some of the rooms on the lower floor at the north side of the house. I thanked Mr. B. for what I had learned, and stored the rest of that year's crop in a south chamber, which, with the 1½-story house which I then occupied, was so close under the roof that it was too uncomfortably hot to sleep in during the summer months. When getting this part of my honey ready for market, it was such a comfort in not having a particle of drip from the unsealed cells, that I resolved when building a shop and honey-house combined, I would paint that part of it black in which the honey was to be stored. On thinking the matter over, I saw that this honey-room should be in the southwest corner of the building, and so it was located there.

After building and locating it as above, the mid-day and afternoon sun would heat this room to 90 and 100 degrees, and in very warm weather it would sometimes go to 106, on account of the black paint absorbing the heat to such an extent. I often feared there would come a time when it would rise to so great a heat that the combs in the sections would melt down; but it never did. When I would get from 1000 pounds to several tons in this room, the whole would become so warm during the day that it would act as a kind of "balance wheel," and thus the temperature would remain from 80 to 95 degrees the whole 24 hours, unless we had several days of cool or cloudy weather, as the honey heated during the day would hold its heat well up to the next forenoon, and again in turn hold its cooler degree, obtained during the night, well up toward the evening of the next day. Later on, when I came in possession of an automobile, I added a "wing" to the south side of a building, covered this with a paper roofing, and painted the wing and roofing with a red paint, using a part of the room for the auto, and a part for storing section honey and getting the same ready for market. In order that I might work at any of my various occupations during the winter months, I put a stove in this wing, and herein I found an additional comfort about the ripening of my section honey.

At two different seasons, with the room in the shop, there came one of those damp, cool times when the air is almost "wringing wet" with moisture, during which the sun was not seen for a space of from 10 days to 2 weeks. I now found that the black paint was no better than white, nor was this room better during such a spell than was those I had formerly used on the north side of the house; the result being, that at the end of these spells the honey had gathered dampness not at all pleasing to me. But with the stove I was master of the situation, even did "Old Sol" see fit to hide his face behind the cold, black clouds for 2 weeks at a time, and the honey was going right on ripening and thickening all the while, even if I delayed getting it ready for market till the shorter days of fall came on with frosty nights.

By thus having my honey thoroughly ripened till it was so thick that it would hardly "run," when a section dropped so as to be broken on the floor by some carelessness on my part, I found that far less would be damaged in shipping, stay much longer in good condition when stored in the warehouse of the merchant, and give far better satisfaction to the consumer.

Borodino, N. Y.

Long-Tongue Clover Queens, Etc

BY G. C. GREINER.

It is not my intention to flatter any one, but I believe I can truly say that Mr. Byer always presents his subjects in such a common-sense sort of way that his articles are not only interesting but instructive at the same time. Although I do not see things always as he does, I agree with him on many points. On page 332 (1909) he says:

"The long-tongue-idea, in so far as it refers to the different races, is pretty much a humbug." This is exactly my opinion. I always thought so, and I think so yet, and the reason why I have never expressed myself publicly in such a decided way is because I was waiting for some good authority to bear me out in it.

During a bee-keeping career of about 34 years, my banner colonies that produced the heaviest yields of honey have always been blacks or hybrids—never Italians. A year ago last summer I had one Italian queen that did better than anything else I had late in the season, but her aggregate yield was below that of many others in the yard. The colony that produced my largest yield last season—about 265 pounds of white clover honey, gathered in less than 20 days, and from 45 to 50 pounds of buckwheat honey—were a mixture of one Italian to three blacks—hardly enough Italian blood mixed in to call them hybrids. Where does the long-tongue feature come in, in this case? Have they retained it as an heirloom from some of their ancestors?

On the other hand, I have all regard for the sincere intentions and claims of our long-tongue queen-breeders; their efforts to benefit mankind are very commendable, but, in my opinion, they are deceived. It is with the long-tongue theory the same as it is with all our imagined successes. At first we feel a little skeptical ourselves, but we keep harping on our pet theories from one year to another until we believe them ourselves, while the world at large is laughing at our foolish notions.

BEE-TIGHT HONEY-HOUSE.

On the same page, Mr. Byer makes some remarks on the bee-tight honey-house question, and I indorse all he says in its favor. A bee-tight honey-house is certainly a bee-keeper's desideratum. I can tell Mr. B. that my honey-house is not only bee-tight, but fly and mosquito tight also; and that isn't all, it is as mouse, rat and squirrel proof as it is bee-tight. To read Mr. B.'s squirrel experience is quite amusing. I would not advise any of his squirrels to enter my honey-house uninvited; I would make their visit so decidedly unpleasant that they would not call a second time.

When I built my present honey-house, some 8 or 9 years ago, I intended to use it as a fumigating box whenever necessity should require it. But during all this time I never had any real occasion for this purpose. I fumigated once—the second year it was built—just to see how it would work in case of need. I noticed a few webs among the combs on the comb-shelves, and for an experiment I set the sulphur smudge a-going. It made such a complete job of it that I could not ask for any better arrangement. And in regard to mice or rats, I never had the first sign of either. I am so completely set against these vermins that I would leave, if they wouldn't. But I venture to say, that their stay would be extremely short, if any of them would risk their poor carcasses inside of my honey-house. There is no hiding-place anywhere. The whole building—floor, sides and roof—is made of matched and dressed lumber; doors and windows and all joints are as close-fitting as mechanical workmanship could make them, so that the building itself is a trap for all undesirable visitors that get inside of it.

BUCKWHEAT SWARMS.

As a rule, we have no buckwheat honey to speak of in this locality. The conditions Mr. Byer describes in his article on the same page, nearly covers my case. Although he beats me a little on the surplus, I can "go him one better" on the time of issue. A year ago last summer we had an uncommonly heavy buckwheat flow during the second half of August, which changed to a continual flow from fall flowers, lasting until the middle of October. Contrary to former experiences, I had a regular buckwheat swarm on Aug. 16th, and still another on the 26th. Both swarms were equally as strong as any regular prime swarm in June, especially the second one, which I hived on a set of empty combs, expecting to supply them with the necessary winter stores by exchanging some of their empty combs for heavy combs of honey. During the few weeks following they grew so heavy that I considered them all right without any extra feeding; and when I requested a bee-keeping friend, who called at the yard later in the season, to lift this hive, he was surprised when I told him the date of their issue. They actually seemed, as Dr. Miller says, nailed to the ground.

But I made the mistake not to provide them with a set of extracting combs, for undoubtedly they would have stored some surplus. It is often on account of our own neglect that we are the losers. As we can not foretell the season, it stands us in hand always to be prepared for just such emergencies. With the honey-producer, a few days ahead or behind-time will many times make all the difference between gain or loss.

La Salle, N. Y.

Nosema Apis—A Bee-Parasite

BY C. P. DADANT.

This newly discovered parasite of the honey-bee is not yet proven to be the cause of the spring diseases of the bee—dysentery, diarrhea, paralysis or May disease—and I fully agree with the editorial in the American Bee Journal for June, concerning the needlessness of worrying about its discovery. There would rather be cause for rejoicing that another step has been made which may enable us to conquer diseases already existing, but which have thus far been permitted to thrive until they naturally worked themselves out.

I repeat it, it is not at all proven that Nosema Apis is the cause of bee-diarrhea, constipation or May disease, however probable it may seem. It is true that Dr. Zander has succeded in reproducing the disease by feeding colonies with honey mixed with excrements of diseased bees containing this parasite. But the English scientists had already pointed out what they thought to be the cause of these spring diseases; some of them described a bacillus which they named "bacillus depilis," owing to the hairless appearance of the diseased bees. Cheshire also described what he called "bacillus Gaytoni," charged with the same misdeed.

In order to be able distinctly to trace a disease to a certain organism, it is first necessary to single this organism out from among the thousands which inhabit every living or dead body, make cultures of it containing no other organism, and then succeed in producing the identical disease with the these cultures. Failing in this, or doing what was done by Dr. Zander, you can only surmise concerning the probability of this parasite being the true cause, and not a result, of the disease. What happened concerning foul brood is an evidence of the correctness of this. Dr. White, of the bacteriological Bureau at Washington, has clearly shown that the true bacillus of malignant American foul brood could not be cultured on ordinary bouillons, beef broth, etc., but could be reared only on larval food. When by the help of the microscope you investigate the domain of the infinitely small, you meet thousands of different organisms, animal and vegetable, and in order to find the guilty one you must breed them in turns and test singly their powers for harm, if you wish to be positively sure.

The Germans themselves long ago thought to have detected the cause of the May disease, and described a micro-organism which they called "mucor mucedo," of which T. W. Cowan gives a description in his "Guide-Book," page 187, and through the action of which these scientists explained the diseased bees' inability to fly. This inability is well known, and is one of the reasons for naming the disease "paralysis."

The reader thus sees that there has been no lack of research and information concerning the malady, but nothing definite was proven. It is much to be hoped that Dr. Zander is right. If we can once put our finger on the cause of the trouble, the remedy will be more easily secured.

Dysentery, or more properly diarrhea, and the May disease, are quite different in their conditions, although in some cases the latter may have resulted from the former. In dysentery, the bees having been confined to the hive in cold weather on improper food, are unable to retain the fecal matter contained in their bowels, and instead of waiting till a warm day to eject it as usual in the open air on the wing, they discharge it at the entrance, and often even on the inside among the cluster. They soil each other in this manner, crawl out or scatter about the hive, get chilled, and die. It does not matter whether the food consists of too thin or watery honey, or honey containing a large percent of pollen or of honey-dew, fruit juices, or even the product of sorghum mills, and perhaps sometimes of watery sugar syrup of low quality. Long confinement and poor food combined often produce this result.

In mild cases where only a portion of the bees suffer, or when the confinement is not of sufficient duration to compel them to discharge themselves in the hive, the bees, after a good flight, may become healthy again. Evidently there are different degrees of the disease. After confinement bees always discharge a certain amount of fecal matter, but out-of-doors and on the wing, and in healthy conditions, this matter is nearly solid, and there is no trace of diarrhea.

It is not only in cold weather and under the above-mentioned conditions that such a disease may cause havoc and ruin. The confinement of a colony to the hive with fresh honey in hot weather, without sufficient ventilation, may produce a similar result within a very few hours. Years ago Mr. Langstroth noticed this fact, which he related in the following words:

> "When bees are confined to a close atmosphere, especially if dampness is added to its injurious influences, they are sure to become diseased, and large numbers, if not the whole colony, perish from dysentery. Is it not under circumstances precisely similar that cholera and dysentery prove most fatal to human beings? * * * I examined last summer (1852) the bees of a new swarm which had been suffocated for want of air, and found their bodies distended with a yellow and noisome substance, just as though they had perished from dysentery. A few were still alive, and instead of honey their bodies were filled with this same disgusting fluid; though the bees had not been shut up more than two hours."

Since the above was written by Mr. Langstroth, the same remark has been made by myself and many others.

The May disease is very different from diarrhea or dysentery. It is true that in this malady the abdomen of the bees is distended also with nauseating fecal matter, but it should be called constipation rather than dysentery, for in nearly every instance the bees are unable to discharge this matter from the abdomen. It causes them to drag themselves about in great misery, moving their limbs with difficulty, and for that reason many persons denominate this sickness "paralysis" or "vertigo." In mild countries the disease has so often appeared in spring at the opening of warm weather that they have denominated it "May disease;" in French, "Mal-de-mai;" in Italian, "Mal-di-maggio," etc.

Sunny Florida, warm Southern California, the province of Ancona, in Italy, on the Adriatic, to the south of Venice (which are all countries with very mild winters), suffer quite often, though irregularly, from the May disease, and the description is everywhere the same—bees crawling about as if in great misery, with more or less distended abdomens, incapacity to evacuate (the reverse of dysentery), their bodies shining because of loss of hairs, and the queen herself sometimes contaminated with the same trouble. The disease has been charged to different causes. In Italy many apiarists strenuously blame its appearance to the blossoms of the hawthorne and other early shrubs (Dubini, L'Ape, page 192), but the disease appears in countries where no such blossoms are found.

Can it be that this disease and ordinary diarrhea are chargeable to the same cause, the Nosema? When we remove the cause of ordinary dysentery, it ceases at once, but the May disease is an epidemic, which, although usually of slight importance, sometimes destroys many bees and impoverishes large apiaries. These matters need further investigation before positive assertions may be made concerning them.

Hamilton, Ill.

Can I Make a Living with Bees?

BY J. C. FRANK.

It depends upon the man or woman who is back of the venture, and how much is required for a living. To the person with ordinary intelligence mixed with good, hard common-sense, not afraid to work, and who has the quality of stick-to-it-iveness that is necessary for success in any line of business, there is no question but what a substantial living can be made with bees, and some money be laid up besides. That is, taking into consideration that the family is not of the over-extravagant kind, and can live within a reasonable limit.

There is no business today that produces quicker returns than bees, or a greater percentage of profit for the money invested. Nothing on the face of the earth is so full of business as the busy little bee. She is more industrious and earns more in proportion to her weight than the human being. Give her a fair chance and she will prove to be a savings bank, yielding daily dividends.

The reason there are so many unsuccessful attempts in the bee-business is, that people who have made a failure in life at some other pursuit finally take up bee-keeping. Nothing could be more absurd; one incapable of making a living in other lines is not very likely to succeed with bees. Then, too, many plunge into bee-keeping on too large a scale, without any previous knowledge or experience.

Did you ever know a man who has lived on a farm all his life, made farming a life study, and without any previous knowledge or experience undertake to practice law or medicine? Or, in fact, any other profession? If you do, you certainly don't know of any one who has made a success of it, do you? One is just as reasonable as the other—it requires just as much experience to manage successfully a large apiary with a profit as it does any other business or profession, yet there are thousands of bright and intelligent men any women who deliberately undertake bee-keeping on too large a scale, without any knowledge or experience, and anticipate quick returns and large profits. These same men would no doubt advise you very fatherly not to undertake manufacturing or any kind of mercantile business unless you had first gained sufficient experience.

To the novice who desires to embark in the bee-business, a brief outline of the surest plan may prove helpful.

First of all, do not plunge. A plunger rarely succeeds unless he has considerable experience. The better way is to handle a few colonies as a side-issue, or work as a helper in a large and practical apiary. Profit by the other fellow's experience. Read, study and observe. Increase your apiary as you gain experience, and success warrants it. By going slowly and carefully while learning, your mistakes will cost you very little.

Location is the foundation of success. A great deal depends upon the locality. Start right, be sure to secure a well sheltered location. This is absolutely necessary.

When conducted along legitimate business lines, and with proper knowledge of the requirements of the business, there is no line any more profitable, in proportion to the amount invested, than that of bee-keeping.

Of course, the first requirement is a knowledge of the business. The second requirement is scarcely less important, and that is, good, energetic stock. Scrubs or hybrids are not profitable in any sense of the word.

Where these requirements are observed there is no industry on a more stable foundation than the bee-business, and there is no industry that is leaping up in popularity faster.

The United States Secretary of Agriculture showed by his last report that the bee-industry amounted to more dollars and cents than any other industry, in proportion.

In all you do, profit by your mistakes, stick to it, and don't become discouraged. A half-hearted individual never won success in any undertaking. Get after it with a determination. A living from bee-keeping is easy enough! Not that alone, but it is the most pleasant and independent business you could engage in. Thousands are making a living from bee-keeping, and paying for nice, comfortable homes. You can be one of them, if you only try.

Dodge City, Kan.

Aids to Swarm Prevention

BY D. M. MACDONALD.

Last month's article reviewed some of the more patent causes for swarming. It may be of interest now to record various means employed for checking or preventing the causes tending towards the evolution of the swarming fever. When a doctor has truly diagnosed any particular disease, he likes to discover the root cause for its appearance; and then, not content with simply applying the known remedies to the actual part or organ affected, he also tries to eliminate the germinating influences or conditions without doing which indeed his medicines or curative appliances would have little or no effect in bringing about a permanent restoration to health.

The causes already given supply us with some fundamental reasons for bees swarming, and these may now be grouped into three classes: 1st, Those centering on the queen. 2d, Those relating to the condition of the brood-nest; and 3d, Extraneous circumstances relating chiefly to the hive, locality, and surroundings. Under each of these heads it may elucidate the matter if we consider briefly the means generally employed to prevent the swarming bacillus from taking root and growing. Assuming that when working for extracted honey the bee-keeper has the matter fairly well under control, what will be said relates mainly to those who work for comb honey.

Queens.

1. Old queens are an undoubted source of swarming. Young queens, on the contrary, are distinctly averse to taking any steps tending to unsettling the domestic arrangements of the hive interior. Some authorities go so far as to assert that a young home-bred queen will not issue with a swarm during her natal season. If not prepared to go, the whole experience tends to the conclusion that it holds good to a very marked extent.

2. Withdrawing the queen temporarily at the critical period has certainly a deterrent effect. Brood congestion ceases, cells become available for storing, nurses become active foragers at an early date, and the interregnum causes a new set of circumstances to prevail in the brood-nest. Therefore when the queen is restored, the whole force is intent on gathering and storing honey, consequently all desire for a trek has been suppressed, and a sweet feeling of content follows her reintroduction. The Spirit of the Hive, aware of the necessity for strengthening their numbers by mere brood instincts, the workers to clear and polish all cells, will, in advance of her requirements, consign the honey upstairs where the bee-keeper most desires to have it stored.

3. Temporarily caging the queen has at least a moderating influence in retarding preparations for the construction of swarm-cells. It acts on the bees somewhat as did her withdrawal, but may not be so good for herself; and confining her on one or two frames separated from the regular brood area by some open divider might be more effective.

4. Cutting out embryo queen-cells periodically is a distinct check, but it is an upsetting job, and raises so much disturbance, unless where special circumstances aid the operation, that it is not so extensively practiced as it was at one time. The same may be said of "inversion." In both cases good is mixed with evil.

5. Perhaps clipping the queen's wings is depended upon more than any other "cure," but it has no power to check the instinct.

6. Two or more queens in one hive is a system only yet on its trial. Along this path, however, there is food for thought, and ample scope for experiment.

Brood.

Closely allied to the question of the queen is that of the brood.

1. A congested condition in the breeding chamber at once generates the swarming impulse, and when it synchronizes with several other prime factors, the fever turns into a mania. A timely withdrawal of one or more frames of sealed brood, and the substitution of a frame or frames of comb or foundation, not only supplies the queen with room for ovipositing, but affords work for the bees eager to build, store or nurse the new batches of larvæ.

2. Spreading the brood, timeously carried out, at least partially carries out the same end frequently, and will be more fully considered in the concluding article.

3. The "Jones plan" is merely named to be rejected as a cruel, gruesome and unnecessary device. Practically the same end can be secured with humane treatment of the brood-nest.

4. The close connection between the appearance of drone-brood in a hive and the inception and construction of embryo queen-cells is very noticeable. Therefore, everything possible should be done to keep the brood-nest all-worker comb. If a few drone-cells are desired, provide them only in the outer frames.

5. Doubling the brood-frame capacity by placing a second body above or below the first, and giving the queen the whole range of, say, 20 frames, is one of the best aids to swarm prevention. But queen and bees have here ample scope for their energies. Double early in the season, and contract later.

6. What is known as the "Simmins method" is credited with a power to check swarming. Using a long combination hive some half-dozen frames in front are fitted with starters only, and this space is never allowed to have its combs completed, nearly full frames being regularly withdrawn and others substituted. The theory here is that bees never kept the swarming instinct with this empty space in front of the brood-nest.

7. What is known as a non-swarming chamber, simply a shallow-frame body, is placed below the regular brood-frames, and as fast as bees build out the combs, the case is raised above and replaced by another set of frames. Theoretically, both these systems should work efficiently, but practical difficulties arise, while at best they cause hard labor.

Hive, Etc.

The third set of circumstances and mode of procedure hinge around the hive, its surroundings and location. Heat being one of the chief factors causing swarming, any moderating influence must aid in checking the desire.

1. Shade is one of the main requisites. With a very high temperature, no cooling breath of air about, and a broiling sun beating in full force on the bees' domicile, conditions are bound to be very irksome to the inmates. Therefore, every known mode of shading and cooling the hive should be tried.

2. Ventilation of the brood-body is essential in such circumstances. Wedge up not only the hive front, but the whole fabric, so that a current of air can play all under the overheated bees and combs. The fanners can then drive out the foul air and introduce a supply pure and fresh, not only at the entrance, but all around from front to rear.

3. Ventilating supers is no less a necessity in periods of very excessive heat. If the roof is tilted aside, and the coverings eased up, the bees find immediate relief, and their toil is carried on in a way which makes life more worth living. Further, better and more efficient work can be overtaken.

4. Ample room in the supers hinders congestion above and below, affords timely employment for lately hatched bees, hitherto hindrances and not helps, and secures a more bearable temperature. A "cooler" case given above the other supers sometimes in advance of the bees' requirements, is looked on in this locality as one of the best aids to prevention.

5. "Shook" swarming fairly "takes the bull by the horns," and, at least sometimes, puts and end to the desire to seek strange fields and pastures new, but it has not "caught on" much over here.

6. Somewhat akin to this drastic treatment was a mode of procedure frequently practiced by our forefathers. They, instead of going through the process of shaking, simply changed hives. They carried the "boiling over" colony to the stand of a weak one, and replaced it by the weakling; thus almost in an instant, as they fondly hoped, checking swarming and equalizing forces so that both would be fit for surplus gathering.

7. Several swarm catchers are on the market fairly efficient in their action, but their cost, the hindrance the excluder-zinc proves to the busy toilers, and the trouble they sometimes entail, rather rule them out of court for the extensive bee-keeper.

8. Never, if possible, use excluder-zinc over frames when working for comb honey. If they are not in the full sense honey-excluders, they are swarm generators. Anything checking free intercourse must impede progress, and undoubtedly by hindering upward ventilation they help to bring about the swarming fever.

Banff, Scotland.

"Why Are These Things So?"

BY F. DUNDAS TODD.

Mr. Doolittle asks an important quesiton, on page 16, but doubtless the editor is sorry he ever allowed it to go into print, for the odious word "socialist" occurs in the article at least two times, and everyone of the readers marching under the banner qualified by that word will feel he has been specially invited to make an answer. Furthermore, the socialist is sure he is the only one competent to answer correctly.

Firstly, let me say that Mr. Doolittle does not know very much, if anything about socialists and socialism, for if he did he would not assert that socialist papers are blaming the tariff for higher prices of lumber and other commodities. They know better.

To undertsand the reason of the comparatively swift advance in the prices of most commodities, not only in this country, but the world over, one must know a little about the principles of political economy. The socialist movement is based on economic principles eminated by Karl Marx, and I will endeavor to set forth briefly a few of his tenets, and then make special application of them to the problem in hand, which is this: When practically all other commodities are rapidly advancing in price, why does the bee-keeper get for his product (honey), the price that held good 23 years ago?

According to Marx, the real value of a commodity is the average social labor necessary to produce it. Production is no longer an individual affair, it is a social matter. To produce a section of honey, for instance, Mr. Doolittle's labor is concerned with only one part—the filling of the sections and preparing them for the jobber; but others assisted him by making the section-frames and the wax-foundation. Behind them is an army of others providing the raw material, from the cruiser who located the timber up to the man who sawed the wood into thin strips. Modern production begins with the discovery of the raw material, and ends by placing the goods in the hands of the consumer. This accounts for the expression, "social labor necessary," in the definition.

Mr. Doolittle says that he occasionally exchanges honey for butter, that is, he trades the product of his labor directly for that of the farmer, or, stripped to its elements, he exchanges labor for labor. Sometimes he sells for money, that is, gold, which is also the product of labor. Economic law says that in the transaction there must, on the average, be an even exchange of labor value, of the necessary labor to produce the honey and the gold remain constant, prices will remain stationary, but if one of them require more or less, then more or less of the other must be given in exchange.

For instance, suppose it takes as much labor to produce 130 sections of honey as it does to produce one ounce of gold, then they are of equal value. But if by improved methods 200 sections can be produced by the same amount of labor, while it takes as much labor as before to produce the ounce of gold, then Mr. Doolittle will have to give his 200 sections for the ounce of the precious metal. The price of section honey we say has fallen. Conversely, if the ounce of gold is got with less labor than formerly, but there is no change in the labor necessary to produce the sections, then more than an ounce of gold must be given for the 130 sections, or, if we want to give only the even ounce of gold, then we must be content with the fewer sections. The price of honey is supposed to have gone up, but as a matter of fact, the price of gold has gone down, as expressed in terms of honey.

Of course, all kinds of variations may and do occur. It is possible, for instance, for improved methods of production to keep equal step with both section honey and gold, in which case the exchange will be constant, and we say there is no variation in prices.

During the past 15 years the price of most commodities have simply soared, and are about 50 percent above what they were in 1895. What is the cause? The undoubtedly correct answer is, depreciation of gold, due to improved methods of mining the ore and securing the metal. So improved are the processes that in the past 25 years the world's output of gold is equal to that of the previous century and a half. Therefore to buy an article that cost an ounce of gold 15 years ago, we must give an ounce and a half. In common speech, prices have gone up 50 percent, and, so far as I can judge, the end of the upward flight is not yet.

So much for the general principle. But to answer Mr. Doolittle's specified instance requires another application of the same theory. He is a part producer of a section of honey, though doubtless he thought he was doing it all; but production is not complete until the section is in the hands of the consumer. Production essentially consists in moving—moving the article from where it is not wanted to where it is wanted. His part is to move the section-frame several times; to move foundation about as often; to move the combined result into the hive, then out, then into the shipping-case; next to the depot. Many others move the honey along to the consumers, and when it reaches him, movement ceases, and production is finished. Ordinarily the consumer pays full value—no more, no less—for the labor stored up in the section. There is very little robbing at the point of consumption—exploitation takes place in the field of production. Mr. Doolittle's section is being sold to the consumer at its real value, just as he gets full value when he buys. But, like all other workers, he is undoubtedly being exploited as a producer. It is not a fair deal for him, therefore, to compare the retail price he pays, with the wholesale price he gets. Let him compare retail prices with retail, and wholesale with wholesale.

The extent to which a producer or worker is exploited depends upon the kind of industry he is in. Broadly speaking, in the agricultural field the worker gets about 50 percent of what he produces; but the percentage is steadily decreasing as methods are improved. In the industrial world the worker gets about 16 percent; not so many years ago he got 25 percent. The iron law is that the worker gets, no matter in what country, just enough to sustain him in the standard of living peculiar to the region in which he lives. A bee-keeper is essentially a worker, with a modest capital invested, therefore he gets skilled workers' wages, plus the percentage of his capital necessary to replace the annual losses due to the deterioration of his hives and appliances. Improved methods enable him to produce by his own unaided labor more honey than he could produce 23 years ago, hence the price, as compared with many other commodities, has gone down; but Mr. Doolittle is doubtless enjoying about the same kind of a living he got a score of years ago.

It is utterly impossible in a short article to cover all the ground that ought to be gone into to make the proposition clear, so I have tried to keep close to essentials. In closing, I would ask that Mr. Doolittle will kindly note that even if I am a socialist, I have not said a word about the tariff, and I would humbly suggest that before he imputes statements to socialists he ought to investigate a little, and learn from their literature, what they actually do say.

One thing I am grateful for: Mr. Doolittle did not trot out the law of supply and demand, which has found its grave, due to overwork. For a long time it was deemed the steam of the economic engine, but Karl Marx proved it to be merely a regulator. The few who still believe it to be the driving force will have a hard job to explain why prices went steadily up during the period of depression that is said to be now happily past.

Victoria, B. C.

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This book on bees is also known as the "Manual of the Apiary." It is instructive, interesting, and both practical and scientific. On the anatomy and physiology of the bee it is more complete than any other standard American bee-book. Also the part on honey-producing plants is exceptionally fine. Every bee-keeper should have it in his library. It has 544 pages, and 295 illustrations. Bound in cloth. Price, postpaid, $1.20; or with a year's subscription to the American Bee Journal—both for $1.90. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

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Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
DR. C. C. MILLER, MARENGO, ILL.
He does NOT answer bee-keeping questions by mail.

Large Queens vs. Small Ones—Pickled Brood

1. I have a young golden queen, the yellowest and the largest I think I have ever seen, but she has not filled her hive nearly so well as some queens I have. Is it always the case that large queens are prolific, or will she be likely to do better next year? She has been laying only about a month.

2. Do you think pickled brood is contagious? It is so near like black brood that I had to send some samples to Dr. Phillips to find out the difference. But I can rear queens and drones in the colony that has had it. ARKANSAS.

ANSWERS.—1. She may do better next year, but not likely. One of the smallest queens I ever had was, I think, the most prolific. But that was an exception. A queen of average size is perhaps usually the best.

2. Pickled brood is not considered contagious.

Honey-Dew Granulated in the Comb

My bees have stored a quantity of honey-dew that has granulated as fast as it was stored. I run for extracted honey, and my store-combs are full of it. I want to get my bees to consume it, and rear brood from it all they can during August for workers for the honey-flow in October. Can I excite the bees every day and get them to consume some of it daily? My bees stored a lot of it some 20 years ago, before I had so many colonies. I then soaked the combs, extracted, and barreled it for vinegar. But it didn't pay for the trouble. I now have 150 colonies with store-combs on, and it would be a laborious job to get them emptied that way. SOUTH CAROLINA.

ANSWER.—I'm not sure that you can do very much toward getting the bees to consume any more of the honey-dew for brood-rearing in August than they will do of their own accord, unless it should happen that at that time there is a dearth, or partial dearth of forage, in which case you can extract the honey-dew and feed it daily. But if you keep it in the combs you will probably find that you can get a good many of such combs used for brood-rearing next spring. Possibly some of the large dealers might buy it for mechanical purposes.

Bees Killing Each Other

I have a colony of bees that have been killing each other for the last 6 weeks. I can not account for the cause unless it is rats. PENNSYLVANIA.

ANSWER.—With no particulars in the case one can only guess. If it is drones they are killing, that may be because of the dry weather causing a dearth of pasturage. If they are killing workers, it is possible that the larvæ of the bee-moth are so injuring the young workers in their cells that their older sisters drag them out. It is also possible that it is a case of bee-paralysis, and the healthy bees are dragging out the sick ones. If that is the case, the sick bees will look black and shiny, and will make a tremulous motion with their wings. As far north as you are, paralysis is not a serious matter, and disappears of itself.

Queen that Seemed to Faint

Has any one ever heard of a queen's fainting? Last week I received a fine queen, and after the bees had accepted her I concluded to clip her wings. The clipping was done with the gentlest of treatment, but to my sorrow she dropped from my fingers—75 cents apparently gone, because I was sure she was dead. Instead of throwing her away, I placed her on top of a brood-frame with feet sticking straight up, where the bees gathered around her and began a sort of a massaging. I supposed at the time that they were attempting to eject her dead body.

The bees worked with her until they shoved her off the top of the frame and she fell to the bottom of the hive. Tiring of watching at the entrance for them to bring out her dead body, I lifted out a frame in order to see what had become of her. There she was lying on her back, but her abdomen was faintly beginning to throb. The throbs became greater and greater (while my heart beat a rat-a-tat-tat-tat) until finally the "little lady of the hive" was placed upon her feet by the bees around her. She then went through motions with her whole body, much like a dog vomiting. I concluded that it was the dying act. After a few minutes, however, she crawled down on to the comb and went about her duties of inspection. She seems to have suffered no ill effects from her swoon. MISSOURI.

ANSWER.—Yes, such cases have been reported a number of times.

Bees in a Gopher Hole

I have a swarm of bees in a gopher hole, which goes directly under and among the roots of a large poplar tree. I would not like to destroy the tree on account of its shade. How may the bees be removed to a stand? IDAHO.

ANSWER.—Perhaps you can drive them out with smoke or gasoline, having a frame of brood outside for them to cluster on. Or you might arrange a bee-escape that would allow the bees to come out but not to go back in again. They would then settle in a hive outside, the hive having a frame of brood to hold them. Of course the queen would not be with them, and so you would have to furnish them a queen. Possibly you might dig away enough earth without injuring the tree, so that you could get out combs and all.

Vegetables in Bee-Cellar—Drones and Queenless Colony—Large vs. Small Hive

1. Do vegetables in cellars have any effect on wintering bees in same?

2. The directions of Kretchmer's swarm-guard say to trap drones and dispose of them by drowning, and if a queenless colony shake them out near the entrance. What effect will the drones have on a queenless colony?

3. What effect has a large hive over a small one, if any? MINNESOTA.

ANSWERS.—1. Not if everything is kept clean and sweet as it should be. If rotten stuff is allowed to accumulate, it is bad for the bees as well as for the people that live over the cellar.

2. I don't know of any effect except to eat up victuals.

3. Not sure I know just what you mean; but a large hive put over a small one has no special effect except that it would be a bad fit, and you would have to close up any opening between the two.

A Beginner's Questions

1. I don't know anything about bees, but I have 7 colonies. Are queen-cells all at the end or at the bottom of the combs?

2. I have one colony of bees which is a small bunch; they don't make comb very fast, and store but little honey. The cells that have no eggs in them have young bees. I thought they were queenless. What is the matter with them? Don't they do anything? PENNSYLVANIA.

ANSWERS.—1. Bees generally build queen-cells along the lower edges of the combs. But if there is a hole, or some irregularity of surface in a comb, thus making room for a queen-cell, the bees do not despise the opportunity. In rare cases they will even build a cell separate from the comb on one of the bars of a frame. If a colony becomes suddenly queenless, they build cells over young worker-larvæ, converting them into young queens, and these cells are often built right in the center of a brood-comb where there is no hole or irregularity of surface.

5. Without knowing more about the case, it is not easy to say what is the trouble. Very likely, however, the colony has a poor queen, producing bees that are too weak or too lazy to work. The remedy in such a case is to give them a queen of better stock.

Swarming Out—From Egg to Bee—Queen-Cells

1. July 10th I had 2 swarms to come out and settle together. I hived them in an 8-frame dovetailed hive with one super on and a queen-excluder between. July 27th they swarmed out and left. The hive was full of honey and comb. Why did they leave?

2. After the above swarms left there were several bees that came back to the hive. I suppose they were out when the others left. Do you suppose they could rear a queen, or would I have to introduce one?

3. How long is it from an egg to a bee? I mean how long after the egg is laid till it is a full-grown bee?

4. Are queen-cells always built before the eggs are laid, or do the bees build the cells over the eggs? TENNESSEE.

ANSWERS.—1. I am sorry to say I don't know. It was certainly a very unusual occurrence. The thing that makes it hard to make a guess is their staying in the hive 8 days before absconding. If the super given to them had been on the hive some time before swarming, there is a possibility that there was brood in it and one or more queen-cells, which might induce swarming; but even in that case one would not expect such wholesale desertion.

2. If there was young brood in the hive the bees might rear a queen.

3. For a queen, 15 or 16 days; for a worker, 21 days; for a drone, 24 days.

4. When bees contemplate swarming or superseding, the cell is first built, or at least the cup, and the egg placed in it; but if the queen is by any means lost when no queen-cells are already occupied in the hive, then the bees build a queen-cell over a young larva.

You are standing in your own light to try to get along without a bee-book. The reading of one might save several times its cost in one season.

Queens and Queen-Mating

1. How long after a queen-cell is capped does the virgin hatch?

2. Would a colony be likely to swarm if a queen-cell nearly ready to hatch was introduced and accepted?

3. I have a colony of very cross bees, but fine honey-gatherers; they have 3 decided bands. What kind are they? Would the mating of a queen of mild temperament with a drone of a cross colony, but good honey-gatherers, likely prove successful?

4. How does a queen-breeder mate a queen? NEBRASKA.

ANSWERS.—1. Cowan says the grub hatches from the egg in 3 days, is fed 5 days before it is capped, and in 7 days after being capped the young queen emerges from her cell. I think, however, that the time of sealing varies somewhat, as I have opened sealed cells which contained rather small larvæ.

2. I think it might; indeed, I remember seeing it advised, many years ago, to put a sealed cell in a hive to induce the colony to swarm.

3. I don't know; it might be successful and it might not.

4. Just the same as you do; lets the young queens fly out at their own sweet will. But if he is up to his business, he will do everything possible to allow only desirable drones to fly in his neighborhood. Some remove their young queens to isolated locations where only the right drones are to be found.

Bees Carrying Pollen—Forming Nuclei

1. How long will bees carry pollen after the death or removal of their queen?

2. In forming a nucleus, is it best to remove the queen from the old hive to the new location of the nucleus, or let the nucleus rear its own queen? Bee-keepers seem to differ on this question.

3. In forming a nucleus in a 10-frame Langstroth hive, by using 3 to 4 frames of brood and honey, would you fill the balance of the nucleus hive with frames with full sheets at once, or say give 4 or 5 at transfer, and balance when these are filled? MISSOURI.

ANSWERS.—1. I don't know, but for a considerable time, as you will find the combs of a queenless colony usually pretty well filled with pollen.

2. In no case is it advisable to let a nucleus rear its own queen. Nothing less than a full colony is good enough for such important business as rearing a queen. After a queen has emerged from its cell, or when the cell is ripe enough for the queen to be within a day or two of emerging, then it may do well enough to use a nucleus. As to the matter

of moving the queen to a new location, you will find that the bees will stay better on the new location if the queen is with them. But bees that have been queenless a day or more will stay in a new location better than bees taken directly from a laying queen. One good way to form a nucleus is to put a colony, or part of a colony, with its queen, on the new location, and then after 2 or 3 days to take away the queen with all the brood and bees except enough to make the nucleus.

3. Doesn't make any material difference; just as well to give additional frames only as needed.

Getting a Patent—Best Comb-Honey Hive

1. What is the best way to get a super for grooved sections patented?

2. Which hive is considered the best for comb honey, the Langstroth or the Danzenbaker?

I have taken the American Bee Journal one month and consider it grand.

NEW JERSEY.

ANSWERS.—1. I think a patent lawyer is always employed to secure a patent. He makes it a special business.

2. Some prefer one and some the other. Probably the great majority have the Langstroth in the popular form of the dovetailed hive.

Progeny of Purely Mated Queen

1. Will a purely mated Italian queen ever produce both black and red drones?

2. I have some Italian queens that I bought as pure stock, and a small percent of their workers show real black on the extreme tip end of the body. Is this a sign of impure blood?

3. Last year I bought some queens and reared them and Italianized my yard of 20 colonies, and some of them show all red drones, and some both red and black. I understand from studying "A B C of Bee Culture," that the daughter of a pure Italian mother will always produce pure drones, even should she mate with a black drone. Please straighten me out on this.

MISSOURI.

ANSWERS.—1. I think she may. The workers are quite constant in their markings, but queens and drones vary considerably.

2. Black on the tip end is no sign of impure blood. If a shiny black, it is a sign that the plumage has been rubbed off.

3. The drone eggs are not fertilized, as are the eggs that produce queens and workers, so the mating of the queen has no effect on her drone progeny. Consequently if a virgin of pure Italian blood meets a pure black drone, although her worker progeny will be mixed, her drone progeny will be the same as if she had mated with a pure Italian drone. That, however, has nothing to do with the fact that there is no little variation in drones of pure blood.

Sections Under Brood-Frames—Comb or Extracted Honey?—Preventing Swarming—Making Increase

1. Do you ever have bees start sections underneath the brood-frames; that is, the super on the first floor, then the hive on top?

2. Are there any serious objections to this?

3. Which is the best to produce, comb honey or extracted?

4. How do you prevent swarming?

5. I have about 100 colonies now. How many have you?

6. I live in the blue-grass section of Kentucky. White clover is very abundant this year. My bees have swarmed so much I will not get as much honey as I would otherwise. I had the surplus combs and hives for them, so wanted some increase. What do you consider the best method of increase?

7. What section do you prefer, the bee-way or plain? KENTUCKY.

ANSWERS.—1. No. But some very good bee-keepers practice it.

2. I don't know that there are serious objections except the labor involved, provided the sections are moved above before there is any sealing done.

3. I don't know which is best for you. Indeed, I'm not any too possitive that I know which is best for me. I produce section honey entirely; but if I were to spend a few years extracting I might think that better. But what is best for one is not always best for another.

4. I don't always prevent it. Among the things that I think may have some influence in preventing swarming are: Keeping the hives shaded; giving abundant ventilation at the bottom of the hive with opening at the back end on top, so that there is ventilation *through* the brood-chamber; keeping out all drone-comb; giving abundant super-room in advance of the needs of the bees; and keeping vigorous young queens. Yet some old queens are less inclined to swarm than some young ones. Cutting out queen-cells sometimes prevents swarming; sometimes not. Breeding from queens whose colonies do not swarm is advisable.

5. 100.

6. The best method of increase depends largely upon the man, and somewhat on conditions. For some, natural swarming is best. For some, artificial increase. Among the different kinds of artificial increase there are so many that space would fail to name them all here. Perhaps there is no place where fuller information on the subject may be found than in "Forty Years Among the Bees."

7. The bee-way.

Position of Laying Queen and Division-Board

1. I have an observation hive. The bees were put into this hive about June 1st, and I have been looking closely for the queen but have never seen her. Is she covered by the workers while laying? They have brood and honey sealed.

2. I have the 8-frame dovetailed hives. I did not know where to place the division-board until I had read the last American Bee Journal. I placed the division-board in the middle of the hive instead of at the side. Do you advise me to open the hives and change them? What harm do they do when placed in the middle of the hive?

ILLINOIS.

ANSWERS.—1. No, she is not covered when laying; but she may be hidden under a mass of bees when not laying. It is a little strange that you have not seen her; but if eggs are present she must be there, and if you persevere you will probably see her.

2. Early in the season, while the weather is cool, the brood-nest should be as compact as possible to preserve the heat, but at the present time a dummy in the center of the hive will do no harm. It's a dummy rather than a division-board, having space all around it so the queen can easily pass from one side to the other.

Bees Not Doing Well—Why?

I have a few colonies of bees, but they are not doing as well this year as last. They stood the winter all right, and were strong enough up to April 25. We had 3 big killing frosts here, and from that day to this they have not done so well. What is the cause of it? I have just looked at them and the queens don't seem to lay as many eggs now as they did in March and up to April 25. What is the cause of that? I have been handling the common black bee for 10 years, and this year they are not doing anything. I have 7 colonies of bees of the golden 5-band Italian, and 7 of the blacks. They are all just about the same. ARKANSAS.

ANSWER.—The remarkable season is enough to account for the trouble. You will likely never have another like it. The very warm spell early set the bees forward and they were in April much as they usually are in June. Then came that terribly cold and backward spell that set them way back, and having a lot of brood on hand they used up stores rapidly. If you had looked closely you would very likely have found that they were entirely out of stores, all brood-rearing stopped, and perhaps all the unsealed brood dragged out. That would leave them too weak now to do their [illegible]. Very likely they ought to have been fed

Uniting Colonies—Bees Working Intermittently—Self-Requeening of Colony—Facing Hives

1. Is it possible, and if so, how would you unite 2 or more colonies? I mean, take 2 small second swarms and kill the queen of one colony before uniting?

2. One of my colonies stopped working while others were very busy. They quit for about 3 or 4 days, and then started to work again, but are not as busy as the others. They seem to be strong. They stopped working about one week after the swarm issued. What do you think was wrong? Can I do anything to get them busy again?

3. In case a queen dies by accident, will the colony requeen of its own accord; that is, if it has brood?

4. In last month's American Bee Journal, I see there is a question asked by me about having the bee-hives "face to face," which should be "face east." Do you think facing east is just as good as facing north?

IOWA.

ANSWERS.—1. At a time when bees are gathering there is little trouble in uniting almost any way. Merely putting the 2 together is generally all that is needed. When nothing is coming in there is more trouble. One way is to alternate the frames, putting into an empty hive first a frame of brood and bees from one hive and then from the other, and so on. Another way is to shake on the ground in front of one of the hives all the bees from both colonies, letting them get mixed up together, and then giving them the combs from both. One of the best ways is to put one hive directly over the other, with 2 thicknesses of common newspaper between them. By the time the bees gnaw the paper enough to get together they will unite peaceably. If a little hole is broken through at one spot it will hurry matters a little, but the hole must be merely a break, but not open so a bee can walk through. If there is any choice of queens, kill the poorer; if not, the bees will attend to the business themselves.

2. If they stopped working for a few days after sending off a swarm, that was nothing unusual, especially if a very large force went with the swarm, leaving very few field-bees in the mother colony.

3. Yes, when the bees lose their queen they will rear another, provided there is present brood not more than 3 days old.

4. There probably is not much difference. A good many think it is better to face east than north.

Rattlesnake and Ground-Squirrels

1. Yesterday (July 9), at our apiary, a loud humming sound was heard, and on investigating it was found that a swarm was forming on a small shrub. For a while it grew in size and then dissolved into a whirling storm of bees and returned to their old location. And, as we were watching, a large rattlesnake went gliding along and into one of the empty hives, evidently through a small entrance, where he was dispatched. Might the snake have caused the swarming, or irritated the bees?

2. We noticed lately that ground-squirrels spend much of their time among the hives, and seem to eat something in their cautious way from the ground. Is it likely that they eat incoming bees for the sweets?

CALIFORNIA.

ANSWERS.—1. It is doubtful that the snake caused the bees to leave the hive. It sometimes happens that bees swarm and then return to their hive because for some reason the queen does not accompany them, and the case you mention may have been one of this kind. Certainly the entrance of the snake into another hive did not cause swarming, as you say the snake was dispatched.

2. I have never heard of ground-squirrels catching returning bees, and it is more likely that if a squirrel picks up anything from the ground in front of a hive it is dead bees or larvæ thrown out from the hive.

A Beginner's Questions

1. I just purchased (July 2) one colony of bees (5-banded Italians, I think) of a man who doesn't know much about bees, and is afraid to go near them. He thinks bees will fill the hive first before they will the super, so he put the super on as soon as they swarmed. The super is nearly full of honey now, but none in the hive. Would you let the bees finish filling the super, or take it off now?

2. Is it advantageous to feed any sugar now? Do they eat it and not so much honey, or do they store it or make honey of it?

3. How can I tell a queen-cell from any other cell?

4. If I destroy the queen-cell will it prevent swarming?

5. If I buy a new queen of some other variety and put it in a strong colony, will they swarm with the new queen? If not, what will they do?

6. Will the colony with the new queen soon become entirely the same kind that she is?

7. Is crimson clover a good bee-plant?

8. Where can I get sweet (yellow and white) clover seed? When should it be sown?

9. I have just subscribed for the American Bee Journal and ordered 2 bee-books, so I expect I won't have to ask questions here after. NEW JERSEY.

ANSWERS.—1. So long as the flow continues it is better to leave the super on till it is filled, as a rule. I'm a little afraid that the queen went up into the super, and that it is filled with brood. In that case all you can do is to leave the super on till all the brood hatches out. When it gets full enough the queen will be forced below for want of room, and when you find the queen below you can put an excluder on the hive to keep her below. Perhaps it may be better to find her in the super and to put her down in the hive below the excluder. If the super is one filled with extracting frames, then you should put the frames in the lower story, provided they are of the same size as the ones in the lower story.

2. Honey should never be fed to bees at any time when they are storing in supers. By so doing you are running against the pure-food law.

3. You will have no trouble in telling a queen-cell when you see one. Queen-cells are utterly unlike other cells, being so much larger. In its first stages a queen-cell looks something like an acorn-cup, and when it is full size it looks a good deal like a peanut When you get your books you will probably find a picture of one.

4. I think you may have an idea that there is just one queen-cell in a hive. You may look through the hive and find none. Or you may find a number of the little cups almost any time of year. But when the bees take a notion to swarm a number of cells will be started. Cutting these out will usually delay swarming for a little, and sometimes it will stop it altogether, and sometimes it seems to make little difference.

5. That depends. If you merely put in a strange queen without any ceremony, the bees will at once proceed to ball her, and she will soon be a dead queen. They will not be induced to swarm by having a new queen put in. If you remove the old queen and follow the instructions for introducing that always goes with a queen sent by mail, she will merely take the place of the queen that was removed.

6. In perhaps 10 weeks the bees in the hive will all be the progeny of the new queen, and will be the same as if she had always been in the hive.

7. Yes.

8. You will probably find it advertised in the bee-papers. It may be sown in spring or fall.

9. You are wiser than the average. There are so many that think they can get along without a bee-book, and they lose big money by it. But you are likely to be mistaken in thinking you will have no question to ask. None of us ever reach that stage, and the questions of those who have carefully studied their books, as you will, are always welcomed in this department, even if they can only be answered by saying, "I don't know."

Manipulations to Prevent Swarming

I am a bee-keeper in a small way—12 to 15 colonies—in Louisa Co., Va., working for comb honey, and for several years past have tried each year a different method of preventing swarming, mostly of my own invention, with failure each year.

My case is somewhat complicated by the fact that I can not visit the place where my bees are kept except at irregular intervals more than a month apart, and the man I employ, while faithful, is even less expert than myself. The locality has an excellent fall flow, of which I take none, and I have not so far lost a colony in the winter or spring. I think this has the disadvantage of sure swarming. Moreover, from fruit-bloom on there is usually a small flow until the middle of July, not very strong at any time, a condition which I believe conduces to swarming. I am using now 2 stories of Danzenbaker hives per colony, and thinking of trying the following method next spring:

As soon as it is warm, before preparations for swarming, interchange the stories, putting the upper story below. Put a queen-excluder between, and make sure the queen is in the upper story. Put on a super also, as my bees often begin storing in supers long before white clover blooms.

In 12 to 14 days examine the upper story, cut out any queen-cells, and shift the stories, keeping the queen in the upper story. Repeat the shift at intervals of 12 to 14 days.

The question puzzling me is this: After a shift, is there danger that the contrary things will start queen cells in the lower story? If there is much likelihood of queen-cells started in the lower stories they would have to be cut out, say a week after a shift, which would double the work. I am not expecting a sure thing, but would be perfectly contented with reducing my swarms to 20 or even 25 percent. If I could be reasonably certain that all queen cells would be started in the upper story, I would take the chance of missing one now and then.

I hope that you will solve my perplexity as to the locations of queen-cells started under the circumstances explained. VIRGINIA.

ANSWER.—Yes, there is always danger that queen-cells will be started anywhere where there is brood from which the queen is excluded, provided, there is present the proper material to start cells on. Possibly there is more likelihood of it with the queen above the excluder than with her below. At any rate, I don't believe you will like keeping the queen above. It is going square against the instincts and habits of the bees. Possibly your idea is that by fastening the queen above the excluder she can not issue with the swarm. But the bees will swarm all the same, even if the queen can not get out, and after a little while there will be a dead queen and a virgin queen. Yet with your shifting the stories every 12 or 14 days there may be no swarming.

I wonder if you have fully tried putting the brood above the excluder and leaving the queen below. That is the Demaree plan, and with some it succeeds in having no swarming with merely the one shift. If you haven't tried it, it is certainly worth the trial. I am not sure that G. W. Demaree paid any attention to cells above the excluder. He merely put all brood above the excluder, leaving the queen below, when the upper story became an extracting story, and there was no swarming.

Bees Hanging Out—Bee-House for Cold Weather

1. Why do bees hang out? I have 36 colonies of bees, and some of them hang out so badly—don't swarm, and don't seem to work. I introduced new Italian queens, but it did not seem to help. I have put 2 supers on each hive.

2. Does it pay to put bees in a bee-house in cold weather? INDIANA.

ANSWERS.—1. The likelihood is that your bees are hanging out for the same reason that mine are—nothing for them to do. About July 10th the drouth cut the clover harvest square off, and up to the present writing (Aug. 3) bees are hardly getting anything. The weather being hot it is more comfortable outside than in the hive, so one can not blame them for hanging out.

2. It pays to give them some kind of protection, either by packing or putting into the cellar; but very few think it well to have them in a house above ground in winter.

Requeening Every Year—Superseding Queens

1. I am impressed with the utility of young queens that are a year old, and I have an idea it will pay to requeen every year. Would there be any objection to this way? Mr. Doolittle, in "Scientific Queen-Rearing," Chapter XXIII, "Rearing a Few Queens," says, "Tier up a hive as for extracting, using a queen-excluder, having a frame of unsealed brood in the upper hive with other combs; in 4 or 5 days you will have one or more cells started; yon can use these for royal jelly for your wax-cups." But now is where my question comes in: Why not let this cell mature, say there is only one?

Why not proceed as he directs on the opposite page? He says if you desire to supersede a queen, all you have to do is to put on an upper story, with a queen-excluding honey-board between it and the hive; place a frame of brood with a queen-cell upon it in this upper story, and after the young queen has hatched withdraw the queen-excluder, and your old queen is superseded without your having to find her, or having the least bit of time wasted to the colony.

2. Would it be just as good to look up the old queen, say some time in August, after the flow is over, and pull her head, and let the bees make a new one? Are there objections to either of these plans? If so, what are they? Of course one would not get any new blood in this way unless he got the frame of brood as described in the first plan, from the hive containing the best queen, to put in this upper story to get the cell from. One could get only a few frames of brood from his favorite, or he would weaken them too much, unless just a small portion of brood could be taken and fastened in a section, and this secured in a frame and placed in the upper story. I saw that done once. An old and experienced bee-keeper showed it to me. He had a colony working nicely in the super; the queen got crippled in some way, and he discovered that the colony was hopelessly queenless. He took a piece of brood from another hive no brood in their hive) and secured it in a section, took out one of the center sections in the super and placed this section containing the small piece of brood in its place, and in due time they had 7 nice cells on this small piece of brood. Of course, he did not use a queen-excluder, as the bees had no queen below.

Now I will ask right here, would not this be a good way to supersede all queens that you wish to supersede, even while they are at work in the supers? Of course, it would stop brood-rearing for a while, for 20 to 30 days right in the flow, which would probably be too serious a matter. I prefer the first plan, as one doesn't have to look up the queen and murder her. That is left to the virgin. Mr. Doolittle says she will not always attend to it. It seems to me that this first way would be the cheapest and easiest way of all, and any one could do it to perfection, even a beginner like myself.

VIRGINIA.

ANSWERS.—1. Your scheme may work all right, and it may not. I think you will find that when Mr. Doolittle is talking about superseding by putting a sealed cell in an upper story, he is talking about superseding a queen that is not young and vigorous. With a vigorous 2-year old queen present, you might find the would-be usurper ousted. Also, you may find that in some cases no cells will be started over an excluder. The chances will be better with an old or failing queen in the lower story. Also, you will be more sure of having cells started above the excluder if the brood is a considerable distance above the lower story, say in a third or fourth story.

2. Killing the old queen and letting the bees rear a successor will probably work all right, only if there should be a fall flow about that time there would be some danger of a swarm issuing with the first young queen that emerges.

You speak of weakening your best colony by drawing brood from it too often. You can draw from it every frame of brood once a week, and have it grow stronger instead of weaker. Each time you draw a frame of brood, put in its place a frame of brood from some other colony, and if the brood you give your best colony be more mature than that which you take away, the process will be strengthening and not weakening.

Bee-Moth—Producing Comb and Extracted Honey

1. In looking in one of my colonies one day I saw some worms about ½ inch long, and some of the cappings were eaten off the brood. What are the worms? Do they eat off the cappings?

2. What is a good way to get rid of them?

One night when looking at a hive we saw a toad sitting on a box, and when the bees came out he would grab them and gobble them up.

3. We produce comb honey. Do you think it would be better to produce comb *and* extracted? NEW YORK.

ANSWERS.—1. It was the larvæ of the bee-moth often called wax-worms) that you saw, and they no doubt have eaten off the cappings.

2. The best remedy, or rather preventive, is to have strong colonies. Italians are better than blacks about cleaning out the worms, and it is possible that your bees would be much improved as to fighting the moth, as well as in other respects, if you would get one or more queens of Italian stock to breed from.

3. Hard to say without knowing all the circumstances. It depends a good deal on your market. In some places extracted honey is little wanted, and in others it will sell for nearly as much as comb honey.

Reports and Experiences

Bee-Keeping in Cuba

I am up in the mountains about 30 miles northeast of Trinadad, in one of the finest valleys on the island. It is high above sea-level, with no insects, plenty of fine air and water, and as healthy a locality as anywhere on earth.

We have 250 colonies of bees in American hives that we bought in Cuban logs and transferred to the hives. We expect to increase to 1000 colonies by Oct. 1st.

We have fine weather here in summer—not too hot—and the nights are always cool. Our winters are simply grand—they are dry; from May to October we have rains. However, it is not "Old America," and we sometimes long to see the States, and also Old Glory unfurled to the breezes in our own nativity.

Best wishes for the grand "old reliable" American Bee Journal! H. H. ARNOLD.

Trinadad, Cuba, July 4.

Drouth Cut White Clover Short

I am working mostly for comb honey, using the 8-frame Hoffman-Root chaff-hive. I crowd the bees all I can, carrying 2 and 3 supers on each hive, and taking away sections as fast as I can find any that are capped.

We usually have considerable cool weather here until July 1st. The bees are working well on basswood now. The raspberries were a failure. White clover was quite good for a while, but we had a drouth that cut it short We have had some good rains lately which have freshened up the flowers.

Wolverine, Mich., July 22. L. K. FEICK.

Streaked Honey Crop in Michigan

The Michigan honey crop is streaked. The raspberry crop is practically destroyed on account of the frosts, and later the dry weather. Those who have depended upon it have practically no crop. On the other hand, those who have willow-herb, milkweed, etc., are securing a fine crop in certain northern Michigan points. Southern Michigan has a fairly medium crop. The specialist's crop in many instances is short, but the farmer bee-keepers, as a general rule, are securing more honey than usual on account on very light swarming.

A. G. WOODMAN.

Grand Rapids, Mich., July 30.

LATER.—As advised in previous letter, the Michigan honey crop is streaked; the people that depended upon raspberry entirely have no crop. Mr. Chapman, of Mancelona, in recent letters, advises that he will not get any more than the sugar he fed in the spring to keep the bees alive. Other Northern Michigan points are securing a crop and a half (in certain places) where they have abundance of willow-herb, milkweed, etc. The crop is now being secured from there, and of course, they have the advantage of having bees built up on the things that came earlier in the season. A. G. W.

August 2.

Apiarian Exhibits at Fairs

MR. EDITOR:—I have been appointed superintendent for a new department in the coming fair of the Joliet Agricultural Society to be held in Joliet during the coming August, the department being "Apiary."

In the effort to get a good exhibition and to help educate the people of this (Will) county on the subject, I am enclosing a letter which I am writing to every extensive bee-keeper. The object of this, primarily, is to succeed in the ideas mentioned in the enclosed letter.

For the good it may do, would it be out of place in the American Bee Journal, taking into consideration the number of bee-keepers who are also to be in charge of exhibits throughout the country who might read it?

I can report only a small crop of honey here—about 20 percent—on account of dry weather alone. Colonies are all strong, but all the clovers and other field plants are drying up, leaving a scanty pasture.

KENNITH HAWKINS.

Plainfield, Ill., July 23.

[The following is the letter which Mr. Hawkins sent out to bee-keepers:—EDITOR.]

PLAINFIELD, ILL., July 22, 1910.

MR. BEE-KEEPER:—I am writing to you to call your attention to the new department of "Dairy and Apiary," created for the fair of the Joliet Agricultural Society this fall.

Your name was handed to me at a recent meeting of the directors and superintendents as a possible exhibitor.

I am green at the business of a superintendent, but as the good of a Fair comes from the individual effort of the department managers, I am going to write to all the extensive bee-keepers of the county in the effort to secure a good exhibition of those 2 things of which the average person knows so little—that is, honey and bees.

A good exhibit for several years will do many things for the bee-keepers, but chiefly to get the people to know good honey when they see it, creating a demand for a better product, and getting them in sympathy with apiarists, which will greatly aid in getting foul-brood legislation, which this State needs so sadly.

For these reasons I hope to interest you to exhibit, and as any names of extensive bee-keepers will be appreciated if sent to me, I hope to be of some favor to you in the future, and to hear from you in regard to this matter.

Yours truly,
KENNITH HAWKINS.

Good Honey Crop

The honey crop will be good in this section this year, averaging perhaps 75 pounds per colony. VIRGIL SIRES.

N. Yakima, Wash., July 30.

Bees Doing Fairly Well

Bees are doing fairly well They are getting some fine honey now. Cleome is in full bloom. Bees are busy on it and on sweet clover. G. D. CALEY.

Cozad, Neb., Aug. 2.

Honey Crop Dried Up

The mercury is at 92 degrees in the shade as I write—11:45 a.m. We have had no rain in 4 weeks, which, with this burning heat, has dried up our honey crop.

G. M. DOOLITTLE.

Borodino, N. Y., July 9.

A Medium Honey Crop

The prospects are for a medium honey crop with fair prices. Extracting is just beginning in this locality Central California. We will take from 20 to 30 pounds per colony, and in 2 or 3 weeks repeat, and so on until Oct. 15th. A. G. REED.

Tulare Cal., July 26.

Bees Doing Fine

Bees are doing fine and bringing in plenty of honey. I have not been troubled about swarming this year. Some of my Italian colonies have stored 3 supers full of honey, and if the weather continues like it is now, they will average about 100 pounds per colony. D. H. GATHMANN.

Forest City, Ill., July 11.

Bees Doing Well

My bees are doing well now, storing honey; but the forepart of the season was very poor—too dry. I had one swarm from 11 colonies; last year 16 colonies and no swarms and no honey; the year before was not much better. We have had some good rains lately which revived the flowers. W. L. POWELL.

Arkansas City, Kan., July 19.

Pleurisy-Root as a Honey-Plant, Etc.

Have you had any experience with white root, pleurisy root, butterfly root all one as a honey-plant? With me it's the thing. On one stalk or plant I counted 38 bees. The plant was about 2 feet high, and as large around as a flour-barrel. It commences to bloom July 1st, and will last for 30 days, or if moved off, from 30 to 60 days. I mean mow half the patch. It grows on the roadside on sandy loam, some on prairies and along fences. It will grow and thrive in sod, or in a door-yard. I enclose a small sprig. Put it in a glass of water and set where the bees can get at it. Probably they will alight on it. The seed enclosed is about the same as milkweed or wild cotton, as some call it here. The honey is quite dark, about like buckwheat or milkweed, but of thick body. I prefer it to clover honey.

There was plenty of white clover, but the bees did not gather much honey. Three rods square of white root is worth an acre of clover. I have also catnip, motherwort, heartsease, Spanish-needle, milkweed, and of goldenrod 3 kinds. I have 20 colonies of Italians, 12 new colonies. I use the 8-frame Langstroth hive with Hoffman frames; also some Quinby style, 11 frames crosswise. I use a T-super on the Quinby, and the standard No. 1 super on the 8-frame, with full sheets of foundation and half sheets in sections. I have some May swarms that I expect to fill 3 supers. There is no foul brood here, but there is some 12 miles north. I lost 10 colonies with dysentery last spring. This is my third year with bees, and I have been stung only once; I was to blame for that. I went to stroke the bees down from the hive and had a hole in my glove.

A. H. HONEYWELL.

Mendon, Mich., July 26.

[ANSWER.—No, I've had no experience with pleurisy-root, as it doesn't grow here. Others, however, agree with you in giving it very high praise as a honey-plant.—C. C. MILLER.]

American Bee Journal Suits Him

Please allow me to congratulate you on the fine appearance of the American Bee Journal the past year, and also for the fine articles contained therein Scholl's wholesale method of putting comb foundation in frames in the June number is well worth the price of a year's subspription, as are also many others, Mr. C. P. Dadant's, especially. Keep the good work up. FRED H. MAY.

Meredosia, Ill., June 28.

A Discouraging Report

It is really amusing to see the different reports from bee-keepers. Some draw beautiful pictures of a bountiful year and a heavy crop of honey; others mark out a very dark road. I am surely on the dark road, for out of 52 colonies I have taken only 75 pounds of honey. Who can beat that? I am now hoping the bees may fill up the hives for winter.

Galax, Va., July 25. G. F. JONES.

Everything Drying Up

I have extracted about 600 pounds of honey from 30 colonies, and can get 200 or 300 pounds more if we have a little fall flow. Of course, it is not much for so many colonies, but weather conditions have not been favorable. We have had no rain to speak of for nearly 2 months. Everything is drying up here, but bee-keepers are hopeful people, so we will hope that we may yet have a fall flow. G. A BARBISCH.

La Crescent, Minn., July 21.

Drouth Cuts Honey Crop Short

Bees did very well here the last 2 weeks in June, but since then they have done nothing. We have had no rain for nearly 2 months, and everything is drying up. In this locality we will not have more than half of the crop we would have had if we had had rain about July 1st. We had the first nice shower of rain last night in 2 months, but it is too late to do much good. I have 120 colonies. WM. J. HEALY.

Mineral Point, Wis., July 24.

The Fritze Non-Swarming Method

I have read the foot-note to the very much appreciated letter from Mrs. E. Monette (page 150), concerning the Dr. H. Jones method of preventing swarming. He fancied that he had discovered the C. Davenport plan, but I think that it is now generally known as a fact that he did not, and I am sure Dr. Jones was aware of it long before Mrs. Monette wrote her letter, because I believe I was the first one to whom Dr. Jones sent the booklet which describes his plan, as he desired me to let him know if it was the same as mine, and, if not, to criticise his plan, which I did in a lamb-like way; and I think I fulfilled his wish, because I have never heard from him since.

I think the Editor came to a rather sharp and quick decision when he made the statement that his non-swarming method perished with Mr. Davenport when he was burned to death with his house and its contents. I don't know whether or not my method is the Davenport method, but I know that it is the W. F. Fritze method. I also know some time before Mr. Davenport wrote his articles in the American Bee Journal that he had discovered my method, when he said, Aug. 3, 1905, page 536, "I can swarm any colony artificially so as to get more honey, either comb or extracted, than if they swarm naturally, or do not swarm at all."

I hope the readers of the American Bee Journal will be roused out of their dreamy sleep in which they likely have been lulled. by the publication of this letter. I don't want it as an advertisement, but simply to make known that the rival of natural swarming, which is known as the C. Davenport method, did not perish, and is not perishable, and that no one need have any fear that the world will become overstocked with honey as soon as it becomes known. But I do claim it will cause the shackles to fall, and that it will be as welcome as a rain in the time of drouth.

My book is already written, but, as I am a poor writer, I must re-write it once more. Its title will be. "The Rival of Natural Swarming, Discovered 1895 in Crossing the Bumble-Bee Drones with the Honey-Bee Queens;" and the book will also tell how it was discovered.

I hope that Dr. Jones will have disposed of as many of his radical cures of the swarming habit as he desires by the time I get my book printed, for it is likely to be a bad parasite and cause a relapse in all his radical cures. W. F. FRITZE.

Minnesota, July 15.

Good White Clover Season

The season here is very good. The spring was pretty hard on the bees, but when white clover came on they did splendidly.

I am now nearing my 86th birthday, and my nerves are as steady as they were 65 years ago.

I appreciate the American Bee Journal very much. (REV.) MILTON MAHIN.

Newcastle, Ind., July 18.

[We congratulate Mr. Mahin upon his 4 score and 6 years. May he go on to his 90th, "and then some."—EDITOR.]

Bulk-Comb Honey Good Enough

It is too dry here, but bees are storing some honey. Except for a few sections we always use long frames. Bulk-comb honey is good enough for us, and we have never sold any of it for less than 15 cents a pound.

We have the best success here with 8-frame hives, by adding another story without queen-excluder, as soon as the colony needs more room.

We find the pictures of apiaries one of the best parts of the American Bee Journal. CLARENCE DODD.

Popejoy, Iowa, July 10.

Season of 1910

I started the season of 1910 with 120 colonies. Swarming began June 11th and continued for more than 3 weeks, getting from 1 to 7 swarms a day. I kept increase down by various expedients, so that I have now about 160 colonies.

The honey-flow began early, and was good until about a week ago. Storing is very slow now. EDWIN BEVIN.

Leon, Iowa, July 31.

"Langstroth on the Honey-Bee"

This is one of the standard books on bees. It tells in a simple, concise manner just how to keep bees. It was originally written by Rev. L. L. Langstroth, who invented the movable-frame hive in 1851. The book has been brought right down to date by Dadant & Sons, than who there are no better or more practical bee-keepers in this or any other country. It contains nearly 600 pages, is fully illustrated, and is bound in cloth. Every topic is clearly and thoroughly explained, so that by following its instructions no one should fail to be successful with bees. Price, postpaid, $1.20; or with the American Bee Journal one year—both for $2.00. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Wants, Exchanges, Etc.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

FOR SALE—Sweet Clover Seed after September 1st. Wm. Craig, Luce, Mich.

FOR SALE—160-lb, honey-kegs at 50c each f. o.b. factory. N. L. Stevens, Moravia, N. Y.

UNTESTED Queens, 75 cents; Tested, $1.25. Breeders, $5.00 each. E. M. Collier, 8A12t 75 Broadway, Ossining, N. Y.

FOR SALE—27 colonies in new 1½-story 8 & 10 frame hives. For price and description, Address, G. C. Thacher, Rt. 3, Kingsley, Pa.

FOR SALE—80 Italian colonies bees in good 10-frame hives, all in good shape; will sell in lots of 5 or 10. E. E. Williams, Olathe. Colo.

MAINE-BRED Italian Queens—Untested 75c Tested $1. Nuclei and full colonies. Red-clover strain. Write for price-list. 8A3t. Eugene Watson, R. F. D. 2, Madison, Maine.

FOR SALE—Golden Queens that produce 50 to 100 percent 5-banded bees. Untested, $1; Tested $1.50; Select Tes. $2; Breeders, $5 to $10 8A12t J. B. Brockwell, Bradley's Store, Va,

WANTED—Fancy Comb & Extracted Honey from producers, in large quantities. Send Sample of Extracted and prices.
C. W. Harmon Co., 31 Josephine St.,
8Atf Asheville, N. C.

WANTED—Some one who wants a good location for bees, to take up a homestead or Government land. I know a few nice vacant pieces. Address, Jas. M. Level, 8Atf Yacolt, Clark Co., Wash.

FOR SALE—Choice extracted honey for table use, mostly sweet clover—water-white, thick, well-ripened, flavor simply delicious. Price, 9c per lb. in 60-lb. cans. Sample, 10c.
J. P. Moore, Queen-Breeder, Morgan, Ky.

FOR SALE—35 colonies of 3-band Italians in new 10-frame Danz. & dov'td hives that *must* be sold by Oct. 1st. Write for prices or make offers. Any reasonable price takes them.
S. A. Peck, Box 124, Northumberland, Pa.

FOK SALE—75 to 100 Colonies Italian Bees in 8-frame hives; hives nearly new, and all heavy with honey. No disease. Price. $5.00 per colony f. o. b. shipping-point. Address, 8Atf Wm. J. Healy. Mineral Point, Wis.

FOR SALE—Extracted honey gathered while the country around was covered with white clover bloom. Was extracted from sealed combs. If you want something that will satisfy, send $5.50 per can, for two or more 60-pound cans. Edwin Bevins, 8Atf
Rt. 2, Leon, Decatur Co., Iowa.

In Order to Make Room

For next season's supplies, I will offer 8-frame hives and appliances, nailed and painted 2 coats lead and oil: 1-story at $1.75; Super (4¼ or 4x5), 60c; Hive-Body (with frames and follower), $1.00; Bottoms (⅞), 33c; Covers, 42c; Colorado, 52c.

Frames—Hoffman $2.75 pr 100; Nailed, $4.00
" — 5⅜ 1.85 " ; " 3.00

Other Supplies at regular prices. 2% dis. on the above goods in lots of 5; 3% on 10.

Geo. E. Kramer, Rt. 26, Valencia, Pa.

Pearce Method of Bee-Keeping

This is an illustrated pamphlet 6x8⅓ inches, just issued (July, 1910), "which fully explains the plan of keeping bees successfully in upper rooms, house attics or lofts, whereby any one either in city or country is enabled with only a small expenditure of labor to get a good supply of honey without coming in contact with the bees, and without having the bees swarm out and leave, or being troubled from stings as you work on one side of the wall and the bees on the other. This method also tells the commercial bee-keeper how he can divide his bees when he wishes to, instead of waiting and watching for them to swarm. It can all be done on the same day, or days if more than one apiary, as the time required for this operation is merely nominal, no swarms issue and go away. These methods are fully explained in this book, and how to care for the bees on the Pearce plan."

We mail this pamphlet for 50 cents, or club it with the American Bee Journal one year—both for $.135. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Souvenir Bee Postal Cards

We have 4 Souvenir Postal Cards of interest to bee-keepers. No. 1 is a Teddy Bear card, with stanza of poetry, a straw bee-hive, a jar and section of honey, etc. It is quite sentimental. No. 2 has the words and music of the song, "The Bee-Keeper's Lullaby;" No. 3, the words and music of "Buckwheat Cakes and Honey;" and No. 4, the words and music of "The Humming of the Bees." We send these cards, postpaid, as follows: 4 cards for 10 cents, 10 cards for 20 cents; or 10 cards with the American Bee Journal one year for $1.10. Send all orders to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Langstroth on the Honey-Bee

Revised by Dadant. Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. Bound in substantial cloth, and has nearly 600 pages. Revised by that large, practical bee-keeper, so well known to all beedom—Mr. C. P. Dadant. Each topic is clearly and thoroughly explained, so that by following the instructions of this book one can not fail to be wonderfully helped on the way to success with bees.

We mail the book for $1.20, or club it with the American Bee Journal for one year—both for $2.00. This is indeed a splendid chance to get a grand bee-book for a very little money.

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Please mention Am. Bee Journal when writing.

Worth Many Times Its Price.

To one who takes an interest in honey-bees, the American Bee Journal is worth its price many times over.
Tacoma, Wash. P. A. NORMAN.

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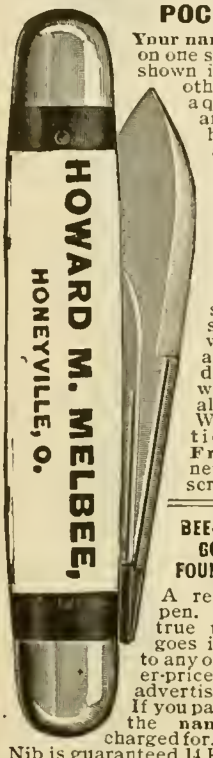
BEE-KEEPERS' NOVELTY POCKET-KNIFE



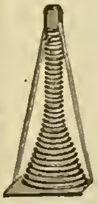
Your name and address put on one side of the handle as shown in cut, and on the other side pictures of a queen-bee, a worker, and a drone. The handle is celluloid and transparent, through which is seen your name. If you lose this knife it can be returned to you, or serves to identify you if you happen to be injured fatally, or are unconscious. Cut is exact size. Be sure to write exact name and address. Knife delivered in two weeks. Price of knife alone, postpaid, $1.25, With year's subscription, $1.00. **Free** for 3 new $1 subscriptions.

BEE-KEEPER'S GOLD-NIB FOUNTAIN PEN

A really good pen. As far as true usefulness goes it is equal to any of the higher-priced, much-advertised pens. If you pay more it's the **name** you're charged for. The Gold Nib is guaranteed 14 Karat gold, Iridium pointed. The holder is hard-rubber, handsomely finished. The cover fits snugly and can't slip off because it slightly wedges over the barrel at either end. This pen is non-leakable. It is very easily cleaned, the pen-point and feeder being quickly removed. The simple feeder gives a uniform supply of ink to the pen-point without dropping, blotting or spotting. Every bee-keeper ought to carry one in his vest-pocket. Comes in box with directions and filler. Each pen guaranteed. Here shown ⅔ actual size.

Price alone, postpaid, $1.00. With a year's subscription, $1.70. **Given free** for 3 new subscriptions at $1.00 each.

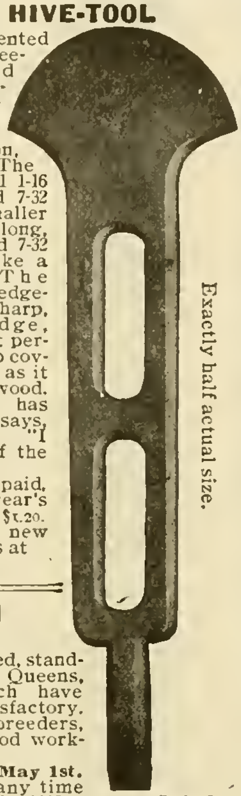
QUEEN-CLIPPING DEVICE



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. 4½ inches high. It is used by many bee-keepers. Full printed directions sent with each one.

Price alone, postpaid, 25 cents. With a year's subscription, $1.10. **Given free** for 1 new subscription at $1.00.

IDEAL HIVE-TOOL



Exactly half actual size.

A special tool invented by a Minnesota bee-keeper, adapted for prying up supers and for general work around the apairy. Made of malleable iron, 8½ inches long. The middle part is 1 1-16 inches wide and 7-32 thick. The smaller end is 1 7-8 inches long, 1-2 inch wide, and 7-32 thick, ending like a screw-driver. The larger end is wedge-shaped having a sharp, semi-circular edge, making it almost perfect for prying up covers, supers, etc., as it does not mar the wood. Dr. Miller, who has used it since 1903 says, January 7, 1907: "I think as much of the tool as ever."

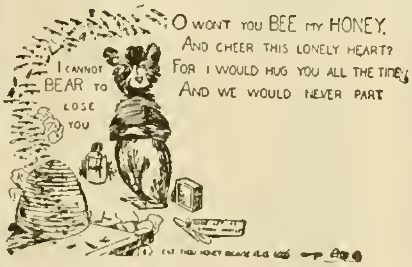
Price alone, postpaid, 40cents. With a year's subscription, $1.20. **Given free** for 2 new subscriptions at $1.00 each.

PREMIUM QUEENS

These are untested, standard-bred, Italian Queens, reports of which have been highly satisfactory. They are active breeders, and produce good workers.

Sent only after May 1st. Orders booked any time for 1908 queens. Safe delivery guaranteed. Price, 75 cents each, 6 for $4.00, or 12 for $7.50. One queen with a year's subscription, $1.40. **Free** for 2 new $1 subscriptions.

HUMOROUS BEE POST-CARDS


O WONT YOU BEE MY HONEY.
AND CHEER THIS LONELY HEART?
FOR I WOULD HUG YOU ALL THE TIME;
AND WE WOULD NEVER PART
I CANNOT BEAR TO LOSE YOU

A "Teddy Bear" on good terms with everybody including the bees swarming out of the old-fashioned "skep." Size 3½ x 5½, printed in four colors. Blank space 1½ x 3 inches is for writing. Prices—3, postpaid, 10 cents; 10 for 25 cents. Ten with a year's subscription, $1.10. 6 **given free** for one $1.00 subscription.

BOOKS FOR BEE-KEEPERS

Forty Years Among the Bees, by Dr. C. C. Miller.—334 pages, bound in handsome cloth, with gold letters and design, illustrated with 112 beautiful half-tone pictures, taken by Dr. Miller. It is a good, live story of successful bee-keeping by one of the masters, and shows just how Dr. Miller works with bees. Price alone, $1.00. With a year's subscription, $1.75. GIVEN FREE for 3 new subscriptions at $1.00 each.

Advanced Bee-Culture, by W. Z. Hutchinson.—The author is a practical and helpful writer. 330 pages; bound in cloth, beautifully illustrated. Price alone, $1.20. With a year's subscription, $1.90. GIVEN FREE for 3 new subscriptions at $1.00 each.

A B C & X Y Z of Bee Culture, by A. I. & E. R. Root.—Over 500 pages, describing everything pertaining to the care of honey-bees. 400 engravings. Bound in cloth, price alone, $1.50. With a year's subscription. $2.25. GIVEN FREE for 5 new subscriptions at $1.00 each.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—How the very best queens are reared. Bound in cloth and illustrated. Price alone, $1.00. With a year's subscription, $1.50. GIVEN FREE for 2 new subscriptions at $1.00 each. In leatherette binding, price alone, 75 cents. With a year's subscription, $1.25. GIVEN FREE for 2 new subscriptions, $1.00 each.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook.—This book is instructive, helpful, interesting, thoroughly practical and scientific. It also contains anatomy and physiology of bees. 544 pages, 295 illustrations. Bound in cloth. Price alone, $1.20. With a year's subscription, $1.90. GIVEN FREE for 4 new subscriptions at $1.00 each.

Langstroth on the Honey-Bee, revised by Dadant.—This classic has been entirely rewritten. Fully illustrated. No apiarian library is complete without this standard work by "The Father of American Bee-Culture." 520 pages, bound in cloth. Price alone, $1.20. With a year's subscription, $2.00. GIVEN FREE for 4 new subscriptions at $1.00 each.

The Honey-Money Stories.—64-page booklet of short, bright items about honey. Has 33 fine illustrations, and 3 bee-songs. Its main object is to interest people in honey as a daily table article. Price 25 cents. With a year's subscription, $1.10. GIVEN FREE for one new subscription at $1.00. Three copies for 50 cents: or the 3 with a year's subscription, $1.30; or the 3 copies GIVEN FREE for 2 new subscriptions at $1.00 each.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keepers' handbook of 138 pages, which is just what our German friends will want. It is fully illustrated and neatly bound in cloth. Price alone, $1.00. With a year's subscription, $1.70. GIVEN FREE for 3 new subscriptions at $1.00 each.

THE EMERSON BINDER

A stiff board outside like a book-cover with cloth back. Will hold easily 3 volumes (36 numbers) of the American Bee Journal. Makes reference easy, preserves copies from loss, dust and mutilation. Price, postpaid, 75 cents. With a year's subscription, 1.50. GIVEN FREE for 2 new subscriptions at $1.00 each.

WOOD BINDER

Holds 3 volumes. Has wood back but no covers. Price, postpaid, 20 cents. With a year's subscription $1.10. GIVEN FREE for one new subscription at $1.00.

BEE-HIVE CLOCK

A few of these handsome "bronze-metal" clocks left. Base 10 1-2 inches wide by 9 3-4 inches high. Design is a straw skep with clock face in middle. Keeps excellent time, durable and reliable. Weight, boxed, 4 pounds. You pay express charges. Price, $1.50. With a year's subscription, $2.25. GIVEN FREE for 5 new subscriptions at $1.00 each.

SEND ALL ORDERS TO THE AMERICAN BEE JOURNAL, Chicago, Ill.

Not Cheap Queens, But Queens Cheap

Prices of 3-Band Queens	1	6
Untested Queens................$	.75	$ 4.20
Tested Queens....................	1.00	5.70
Breeder's Queens................	5.00	

Golden or 5-Band Queens	1	6
Untested Queens................$	1.00	$ 5.70
Tested Queens....................	1.50	8.70
Breeders' Queens................	10.00	

3-Band Nuclei	1	6
One-frame, Untested Queen...$	1.75	$11.20
Two " " " ...	2.25	13.20
One " Tested " ...	2.00	11.70
Two " " " ...	2.50	14.70

5-Band or Golden Nuclei	1	6
One-frame, Untested Queen...$	2.00	$11.70
Two " " " ...	3.00	17.70
One " Tested " ...	2.50	14.70
Two " " " ...	3.50	20.70

Reared from the best 3 and 5 Band Red Clover Italian Breeder Queens.

☞ DIRECTIONS FOR BUILDING UP WEAK COLONIES—10 cents.

W. J. Littlefield, Little Rock, Ark.

Please mention Am. Bee Journal when writing.

Line-Bred Italians!

I am ready to send you a **Long-Lived Prolific Queen,** and if not well-pleased after you have had the Queen two years I will replace or refund money. For prices see Am. Bee Journal for July.

W. M. Parrish, Lawrence, Kan.

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Miller's Italian Queens

From Superior Working Strain

By return mail, or your money back. Northern bred, from the best red-clover working strains in U. S. No better hustlers; gentle, and excellent winterers. Untested, from my 3-banded SUPERIOR BREEDER, 75c; six, $4.00; twelve, $7.50. Safe arrival guaranteed. Circular Free. **ISAAC F. MILLER,**

8A2t REYNOLDSVILLE, PA.

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Special Offer for 90 Days!

We will sell Queens from our famous honey-gatherers. Some colonies have produced 200 lbs. of surplus honey this season. Untested Queen, 75 cents; six, $4.00. Select Untested, $1.00. Tested, $1.50. Twenty-five years' experience in Queen-Rearing.

FRED LEININGER & SON,

8Atf DELPHOS, OHIO.

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Binder Attachment with Corn Harvester cuts and throws in piles on harvester or winrows. Man and horse cut and shock equal with a Corn Binder. Sold in every State. Price, $20 with Binder Attachment. S. C. MONTGOMERY, of Texaline, Tex., writes:—"The Harvester has proven all you claim for it. With the assistance of one man cut and bound over 100 acres of Corn, Kaffir Corn and Maize last year." Testimonials and Catalog free, showing picture of Harvester.

NEW PROCESS MFG. CO., Salina, Kan.

Please mention Am. Bee Journal when writing.

How About Your Advertising?

Have you anything to sell? Any bees, honey, hives, or anything else that you think the readers of the American Bee Journal might want to buy? If so, why not offer it through our advertising columns? See rates in the first column of the second page of every number of the Bee Journal. We try to keep our columns clean and free from any dishonest advertising. Such can not get in, if we know it.

REQUEENING
with Standard-Bred Italian Queens.

The demand for our Fine Standard-Bred Untested Italian Queen is increasing rapidly, because **they give satisfaction.** Here is what two of many pleased customers have to say;

GEORGE W. YORK & CO.—
I must tell you how well pleased I am with the Queen you sent me last year. I thought I had some pretty good Queens myself, but the one you sent me is the best Queen I have now. You know we have had, and are still having, a severe drouth. White clover lasted only two weeks, and while my average of honey per colony is about 40 pounds of surplus, the bees from the Queen you sent me have gathered, so far, more than 100 pounds of fine honey. They are hustlers, indeed, and the bees are very gentle. **Twenty dollars would not buy that Queen.** After this I know where I will get my Queens.
G. A. BARBISCH.
Houston Co., Minn., July 14, 1910.

GEORGE W. YORK & CO.—
I have had a good many Queens from you in the past, and have never gotten a poor one. (REV.) MILTON MAHIN.
New Castle, Ind., July 18, 1910.

We could publish many more testimonials like the above, but what would be the use? As "the proof of the pudding is in the eating" thereof, so the proof of the value of our good Queens is in getting and trying them yourself. Send in your order at once and see the nice, vigorous Queens you will get. Some of the largest honey-producers in this country use our Queens. They know what they want, and where to get it. That is the reason they order our Queens.

If you have not had any of our Standard-Bred Queens, why not get one of them **now** with a renewal of your subscriptidn to the American Bee Journal? No matter if your subscription is now paid in advance, we will credit it still another year, and also send you the Queen.

We mail one Queen with the Bee Journal for a year—both for only $1.40. Queen alone is 75 cents; 3 for $2.10; 6 for $4.00; 12 for $7.50. These prices are exceedingly low in view of the excellence of the Queens. It pays to get **good stock.** Mr. Barbisch as well as thousands of others have proven this.

Now is the time to requeen your colonies. Why not order some of our good Queens?

We are now sending Queens **almost by return mail,** and expect to continue to do this until the end of the season. Address all orders to—

GEORGE W. YORK & CO.,
146 W. Superior St., Chicago, Ills.

Tennessee-Bred Queens!

All from Extra-Select Mothers,
Davis' Best, and the
Best Queens Money Can Buy

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

	November 1st to July 1st			July 1 to Nov 1				
	1	6	12	1	6	12		
Untested	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Select Breeder -	$4.00
Select Untested	1.25	6.50	12.00	1.00	5.00	9.00	Nuclei; no queen 1 fr	2.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00	" " " 2 "	3.00
Select Tested	2.50	13.50	25.00	2.00	10.00	18 00	" " " 3 "	4.00
							Colony. " " 8 "	8 00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,

Dealer in, Importer and Breeder of
ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
Ewell Station on L. & N. R. R.

SPRING HILL, TENN.

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TRAPPERS MAKE MORE MONEY

Copy of 160-page monthly magazine, HUNTER-TRADER-TRAPPER about Steel Traps, Snares, Deadfalls, Trapping Secrets, Raw Furs, Dogs, Big Game, Hunting, Bee-Hunting, etc. Tells how. 10 cents; yearly subscription, $1.00. **Camp and Trail** is a 24-page illustrated weekly devoted to hunting, trapping, etc. Two interesting departments are: THE BROTHERHOOD GALLERY, containing photographs of writers with their letters about game, fish, trapping conditions, etc.; and OLD PIONEER LETTERS. Weekly Raw Fur, Hides, Pelts, Roots and other quotations during the season. Sample 5 cents; yearly $1.50.

Hints for Hunters and Trappers, a 64-page booklet containing Game Laws, Trapping Information and description of books on Hunting, Trapping and Outdoor Life. Sent with orders for copies of either.

A. R. HARDING PUB. CO.
Box 9 Columbus, Ohio.

HONEY AND BEESWAX

When consigning, buying,
or selling, consult

R. A. BURNETT & CO.

199 South Water St. Chicago, Ill

Please mention Am. Bee Journal when writing.

Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

Please mention Am. Bee Journal when writing.

Golden Queens

I breed nothing but GOLDENS by best-known methods.

1 6 12
85c $4.80 $9

(7Atf)

M. BATES, Rt. 4, Greenville, Ala.

MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
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S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
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MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
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WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
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We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

We are in the market for

HONEY

Both COMB and EXTRACTED. State quantity you have to offer, with all particulars.

HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

Root's Goods in Chicago

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

> "Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.
> 43 N. Brighton Ave., East Orange, N. J.

This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only $1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

> LANG, CALIF., Sept. 26, 1909.
>
> *Gentlemen:*—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of of expense. The cost of gasoline and oil used being only 16¢ per ton of honey extracted. It takes the place of a man at $40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here. Truly,
>
> H. A. SLAYTON.

Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

Our Location and How to Reach It

The A. I. Root Co. 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

New England Bee-keepers! **New Stock at Factory Prices**

—:PROMPT DELIVERY:—

Cull & Williams Co.

Providence, - Rhode Island.

Queens Three - Banded Leath'r-Colored Italian QUEENS. Selected Untested, $1.00 each; 6 for $4.50. Also—FULL COLONIES and NUCLEI For Sale. Circular Free.

3A8 **O. F. Fuller, Blackstone, Mass.**

REF.—Arthur C. Miller, Providence, R. I.

Golden and Red-Clover Queens... **From Extra-Selected Mothers**

Untested, 75c; six for $4.00.
Selected Untested, $1.00; six for $5.00.
Tested, $1.50.

Safe arrival guaranteed. Twenty-one years' experience. Send your orders to

E. A. Simmons, Greenville, Ala.

Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

W. H. Laws

BEEVILLE, TEX.

Is again ready with his Italian Queens. There is no mistake but the Red-clover Italians are the best bees known. Letters coming in nearly every day verify this claim. Just read this one:

> DEAR SIR:—The bees from the queens you sent me last spring are breeding finely, gathering honey, and are NOT swarming. If all your reds equal or approach these they are the *best bees in the world*. If you can not fill my order at once that you have bookt I am willing to wait, as I want none but yours. W. LEGETTE, D.D.S.
> Taylorsville, N. C.

I have not dared to advertise until the present, nor reduce prices, as I should be swamped with orders. From the time this ad. reaches you I shall be in a position to fill all orders promptly, but always appreciate a few days' notice before orders are to be filled. PRICES—Single Queen, $1; six for $5.00; Breeders, $5.00.

W. H. Laws, Beeville, Bee Co., Tex.

FARM WANTED

If you wish to sell your farm, give me price, description, etc. I want to hear from owner who wishes to sell direct to buyer without paying any agent's commission. There is a good buyer for it, willing to pay your price. I can locate him for you. Not particular about location. Write me at once, giving full particulars, and state when possession can be had, and see if we can close up a deal in short order. C. F. CALLFAS.
28 King St. West, Berlin, Ont., Canada.

Please mention Am. Bee Journal when writing.

Of Interest

FOR the past 50 years New England bee-keeepers have purchased Bees, Queens, Bee-hives, Supers, Section - boxes, Comb Foundation, Smokers, Honey-jars, and other necessary bee-supplies, of the Reliable and long-established firm of W. W. Cary & Son.

I have recently purchased the above business, and will continue it at the same place as before. I have been associated with the firm for the past eight years, and have had experience in all branches of the business.

I have a fresh supply of the A. I. Root Co.'s goods, which I am able to supply you upon short notice. Send in your orders early and I will give them my best attention. 4A6t

Send for Bee-Supply Catalog.

EARL M. NICHOLS,
(Successor to W. W. Cary & Son)
Lyonsville, Massachusetts

Please mention Am. Bee Journal when writing.

M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.
—BEESWAX WANTED—
LANSING, - MICHIGAN.

Please mention Am. Bee Journal when writing.

Our Famous Red Clover and Golden Queens

Have no equal. Untested, 50 cts. Select untested, 75c. Tested, $1.00. 6A3t

Evansville Bee & Honey Co.,
2439 South Gov. St., - EVANSVILLE, IND.
(Successor to H. A. Ross.)

Please mention Am. Bee Journal when writing.

For Sale Fine GOLDEN ITALIAN QUEENS from good stock at 50c each. J. F. MICHAEL, Rt. 1, WINCHESTER, IND.
7A3 Please mention the Am. Bee Journal.
Please mention Am. Bee Journal when writing.

Write Us To-Day

for our 1910 Catalog and let us tell you all about

DITTMER'S
COMB FOUNDATION
and
WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line** of **Supplies.** It will pay you, and costs nothing.

RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

BARNES' Foot-Power Machinery

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 90c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2A9t

S. F. Trego, Swedona, Ills.

CRANE CELLULAR CASES

Mr. H. W. Coley, of Westport, Conn., writes us:

"I am using your Corrugated Paper Cases for shipping comb honey in, this year, and like them. On one shipment last year of six wooden cases packed in a carrier with a straw cushion, the greater part were ruined. This year the same quantity shipped to the same place in your cases went through without a broken comb."

1. The first cost of the Paper Cases is less.
2. He saved the cost of the carriers.
3. He saved the time of making the carriers.
4. He saved the weight of the carriers.
5. The Paper Cases weigh less than wooden ones.
6. They can be assembled in one-half the time it requires to set up a wooden case.

Send for our Circulars and let us tell you what some of the other large producers and dealers say.

Do not take our word for the value of this new Case.

Plan to order early. Some were disappointed last year.

J. E. Crane & Son, Middlebury, Vt.

CAPON TOOLS

CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c, Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

Italian Bees, Queens and Nuclei

Choice Home-Bred Imported Stock. All Queens reared in Full Colonies.

Prices for July and After

1 Untested Queen....	$0.75
1 Tested "	0.00
1 Select Tested	1.10
1 Breeder Queen	1.65
1-Comb Nucleus (no queen)....	.80

Safe arrival guaranteed.

For price on larger quantities, and description of each grade of Queens send for Catalog. Send for sample Comb Foundation. 4Atf

J. L. STRONG,
204 E. Logan St., CLARINDA, IOWA.

PRIZE TAKERS

Pharr's Goldens took first prize at 3 exhibits in Texas in 1907. We will furnish Golden, Carniolan, Caucasian, and 3-band Italian Queens, untested, $1.00 till June 1, then 75 cents. Tested, $1.50 till June 1, then $1.00. For large quantities, write. Our 3-band Breeders from W. O. Victor and Grant Anderson strains; other races from the best obtainable. "Prompt service and satisfaction," is our motto. Address, 5Atf

NEW CENTURY QUEEN-REARING CO.
or JOHN W. PHARR,
Berclair, - - Texas

Again to the Front with
The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to furnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens, each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

NORWOOD'S Texas-Bred—QUEENS

Three-banded Queen-Bees bred for business. Try them, then you'll know. Untested, $1.00; six, $5.00. Write us.
5Atf **E. B. NORWOOD, Del Valle, Tex.**

Please mention Am. Bee Journal when writing.

"If goods are wanted quick, send to Pouder"
(Established 1889)

BEE-SUPPLIES

Standard hives with latest improvement; Danzenbaker Hives, Sections, Comb Foundation, Extractors, Smokers—in fact, everything used about the bees. My equipment, my stock of goods, the quality of my goods, and my shipping facilities, can not be excelled.

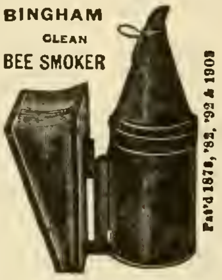
Paper Milk Bottles,

for Extracted Honey. Made of heavy paper and paraffin coated, with tight seal. Every honey-producer will be interested. A descriptive circular free.

Finest **White Clover Honey** on hand at all times.
I buy **Beeswax.** Catalog of supplies free.

Watter S. Pouder, Indianapolis, Ind. 859 Massachusetts Ave.

HAND-MADE SMOKERS



BINGHAM
CLEAN
BEE SMOKER

Pat'd 1878, '82, '92 & 1903

Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the loup so that the liquid creosote runs down inside of the smoker.

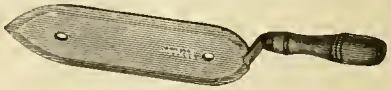
All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made.........	$1.50—4	inch stove
Doctor—cheapest made to use	1.10—3½	"
Conqueror—right for most apiaries	1.00—3	"
Large—lasts longer than any other...........	.90—2½	"
Little Wonder—as its name implies	.65—2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

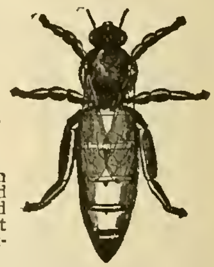
Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.



Patented, May 20, 1879. **BEST ON EARTH.**

Please mention Am. Bee Journal when writing.



DOOLITTLE'S
"Scientific Queen-Rearing"

This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., - - Chicago, Ill.

LEWIS BEEWARE — Shipped Promptly

—SEND FOR NEW CATALOG—

Extracted Honey for Sale. (Ask for Prices.)

Beeswax Wanted. 28c Cash—31c Trade.

ARND HONEY & BEE-SUPPLY CO. NOT INC.
(Successors to the York Honey & Bee-Supply Co.) **H. M. ARND, Proprietor.**
148 West Superior St., CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

Honey and Beeswax

CHICAGO, July 26.—A few consignments of new comb honey have come on the market, the A No. 1 to fancy grades bringing 17c; No. 1, 15@16c, with other less desirable grades ranging from 1@3c less per pound. Extracted white clover brings 8c, with other grades of white 7@7½c; amber, 6@7c, according to body, flavor, etc. Beeswax steady at 30@32c according to color and condition. We look for these prices to prevail for the ensuing few weeks. R. A. BURNETT & CO.

CINCINNATI, July 26.—The market on comb honey is brisk. Fancy white comb is selling in a wholesale way at 15½@16c. Fancy extracted from 8½@9½c; amber in barrels from 6½@7c. Beeswax is in fair demand at $33 per 100 lbs. These are our selling prices, not what we are paying.
C. H. W. WEBER & CO.

KANSAS CITY, MO., July 26.—The receipts of comb honey are fair, and up to date the demand has been equal to the receipts; there is no old or new extracted in the market. We quote: No. 1 white comb, 24 sec. cases, per case, $3.50; No. 2, $3.00@$3.25; No. 1 amber, $3.00@$3.25; No. 2 amber, $2.50@$2.75. Extracted, if on the market, would bring 7@7½c. Beeswax, 25c.
C. C. CLEMONS PRODUCE CO.

DENVER, July 30.—We quote strictly No. 1 new crop comb honey in a jobbing way at $3.60 per case of 24 sections; No. 2 at $3.15. Last season's crop is now all cleaned up. Extracted, strictly No. 1 white, 8⅓c; light amber at 7½c; amber and strained at 6¾c per pound. We pay 25c for clean yellow beeswax delivered here.
THE COLO. HONEY-PRODUCERS' ASS'N.
F. Rauchfuss, *Mgr.*

NEW YORK, Aug. 5.—No arrivals as yet of new crop York State comb honey or near-by, and we do not expect any large shipments until a couple of weeks from now. Have had some sample cases sent in which show up very good as to quality. Market prices are not established as yet, although we should think that fancy white will sell readily at around 15c a pound, and special fine lots may bring more. Off grades accordingly. Extracted is in good demand. Receipts are mostly from the Southern States, and we do not expect any Eastern honey for a couple of weeks to come. New-crop Southern is selling at from 65@70c a gallon for common average, and 75@85c for choice and fancy.
HILDRETH & SEGELKEN.

ZANESVILLE, OHIO, July 27.—Very little new honey has arrived as yet, and so the market is not settled. The market being bare, dealers are having little trouble to get prices asked. For northern comb grading No. 1 to fancy, producers are offered by the jobbing trade 14@15c delivered; best white extracted, 8c, f. o. b. here. The demand for comb honey is in excess of the supply; for extracted, about normal. For good quality beeswax, producers are offered 28c cash, 30c in exchange. EDMUND W. PEIRCE.

INDIANAPOLIS, July 26.—The new crop is now moving, and demand seems to be exceptionally good for this season of year. Jobbers are offering fancy white comb at 17c; No. 1 white, 16c. Finest extracted at 10c, with some slight reductions on large quantities. It is presumed that producers are being paid about 2c less than above quotations. This is not a desirable market for amber honey. Producers of beeswax are being paid 28c cash, or 30c in trade.
WALTER S. POUDER.

BOSTON, July 27.—Fancy white comb honey at 17@18c; No. 1, 15@16c. Fancy white extracted, 9@10c; white, 8@9c;. Beeswax, 30c.
BLAKE, LEE CO.

Superior Italian Queens Select Tested from Imported stock sold for $1.25. Satisfaction guaranteed.
I. A. EGENES, Story City, Iowa.
Please mention Am. Bee Journal when writing.

FALCON FOUNDATION

Years of experience in the manufacture of

FALCON COMB FOUNDATION

have made it PERFECT.
Bees like it, and the foremost

Honey-Producers Use It.

It helps materially to increase the

Honey Crop

(Send for our new Catalog.)

Ship us your

BEESWAX

to FALCONER, N. Y.

Will send shipping-tags, when you write asking for quotations.

We pay highest market prices.

W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

SUPERIOR BEE-SUPPLIES
Specially made for Western bee-keepers by G. B. Lewis Co. Sold by
Colorado Honey-Producers' Association,
DENVER, COLO.
Please mention Am. Bee Journal when writing.

HONEY WANTED

When you have any to offer, let US hear from you.
If it is Comb Honey, state how it is put up, and the grade;
If it is Extracted, mail us a Sample and state your lowest price delivered Cincinnati.

We can use any amount, and are always in the market

C. H. W. Weber & Co.
2146 Central Avenue, Cincinnati, Ohio

BEE-KEEPERS OF THE NORTH

BEE-KEEPERS OF THE WEST

BEE-KEEPERS OF THE EAST

Be Sure to get our PRICES on

BEESWAX

Before selling your season's Wax
or
Let us send to you our prices for
Working your Wax into

DADANT'S FOUNDATION

Many large Honey-Producers prefer our Foundation to other makes, because the bees like it best.

We can use almost an unlimited quantity of BEESWAX, and we are buying at all times of the year **at highest cash and trade prices.**

During the season of 1909 we handled over 175,000 pounds of Beeswax.

BEE-SUPPLIES
OF ALL KINDS.

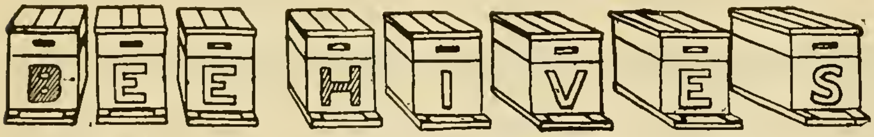
We Keep Only the Best.

Let us Figure on
Your Season's Supplies

1910 CATALOG
Now Ready,
and Free for the Asking.

DADANT & SONS, Hamilton, Illinois.

BEE-KEEPERS OF THE SOUTH



Are our **Specialty.** We furnish such extensive bee-keepers as E. D. Townsend and others. Consider getting your bees into **Protection Hives** this Fall. Give us list of Goods wanted.

A. G. WOODMAN CO., Grand Rapids, Mich.

QUEENS Golden, Red Clover, & 3-Banded QUEENS

Untested, 75 cents each; $4.40 for 6; $8.75 per dozen. Tested, $1.00 each. Queens sent by return mail.
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DANIEL WURTH, Rt. 1, Wapato, Wash.

50,000 Copies "Honey as a Health-Food" To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed free at the bottom of front page on all orders for 100 or more copies.

Address all orders to

GEORGE W. YORK & CO., Chicago, Ill.

Only 25 cents per Case!

60-lb. Empty Tins, two to a case; used but once—as good as new.

C. H. W. Weber & Co., Cincinnati, Ohio.

DO YOU WANT TO SELL YOUR FARM?

If so, give me price, description, and state when possession can be had. I wish to hear only from OWNER, who will sell direct to buyer.

REX A. LEONARD, Andover, Ohio.

Please mention Am. Bee Journal when writing.

QUEENS

AND BEES—an improved, superior strain of Italians is what QUIRIN REARS. All yards winter on summer stands with practically no loss. Our stock is hardy, and will ward off brood diseases.

Last spring we sent fifty nuclei to J. D. Nixon, La Farge, Wis., and on July 20th (same year) he wrote us saying they did just splendid, as at that writing they had already filled their supers, and that he would have to extract them. We have files of testimonials similar to the above.

Prices before July 1	1	6	12
Select queens	$ 75	$ 4 00	$ 9 00
Tested queens	1 00	5 00	9 00
Select tested queens	1 50	8 00	15 00
Breeders	3 00	15 00	
Golden breeders	5 00		
2-comb nuclei, no queen	2 25	12 00	22 00
3-comb nuclei " "	3 25	18 00	32 00
Full colonies on 8 frames	5 00	25 00	

All Queens go now By Return Mail.

Add the price of whatever grade of Queen is wanted with Nuclei and Colonies. No order too large and none too small. Will keep 500 to 1000 queens on hand ready to mail. Safe delivery and pure mating guaranteed. Over 20 years a breeder. Testimonials and Circular free.

QUIRIN-THE-QUEEN BREEDER,
BELLEVUE, OHIO.

Please mention Am. Bee Journal when writing.

Wanted—Old Combs and Slumgum. Will work it for half and pay 30 cents a pound for your share of wax. A. A. LYONS,
8A12t Rt. 5, Box 88, Ft. Collins, Colo.

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AMERICAN BEE JOURNAL

50TH YEAR
No 8

SEP [illegible] 1918
Agricultur

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Mass Ag'l College apr15
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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY
GEORGE W. YORK & COMPANY
146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada, $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec10" on your label shows that it is paid to the end of December, 1910.

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Advertising Rate, Per Agate Line, 15c.

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Nothing less than 4 lines accepted.

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3 times 14c a line 9 times 11c a line
6 " 12c 12 " (1 yr.) 10c a line

Reading Notices, 25 cents, count line.

Goes to press the 6th of each month.

National Bee-Keepers' Association.

(Organized in 1870.)

Objects.

1. To promote the interests of bee-keepers.
2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

Membership Dues.

One dollar a year.

Officers and Executive Committee.

President—GEORGE W. YORK, Chicago, Ill.
Vice-President—W. D. WRIGHT, Altamont, N. Y.
Secretary—LOUIS H. SCHOLL, New Braunfels, Tex.
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Twelve Directors.

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Are you a member? If not, why not send the annual dues of $1.00 *at once* to Treas. France, or to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.? It will be forwarded promptly to the Treasurer, and a receipt mailed to you by him. It is the desire of the officers to increase the membership to 5000 by the end of 1910. Every progressive bee-keeper should be a member of this, the greatest bee-keepers' organization in America.

Crown Bone Cutter
Hens fed cut green bone lay more eggs. Get a Crown Bone Cutter. Send to-day for catalogue.
Wilson Bros., Box 814, Easton, Pa.
BEST MADE
Lowest in Price

Untested Italian Queen-Bees

Our Standard-Bred

6 Queens for $4.00; 3 for $2.10; 1 for 75 cents.

For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

GEORGE W. YORK & Co.:—The two queens received of you some time ago are fine They are good breeders, and the workers are showing up fine I introduced them among black bees, and the bees are nearly yellow now, and are doing good work.
Nemaha Co, Kan, July 15. A. W. SWAN.

GEORGE W. YORK & Co.:—After importing queens for 15 years you have sent me the best She keeps 9 1-2 Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week.
Ontario, Canada July 22 CHAS. MITCHELL

GEORGE W. YORK & Co.:—The queen I bought of you has proven a good one, and has given me some of the best colonies.
Washington Co., Va., July 22. N. P. OGLESBY.

GEORGE W. YORK & Co.:—The queen I received of you a few days ago came through O, K. and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days. She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line.
Marion Co., Ill., July 13. E. E. McCOLM.

We usually begin mailing Queens in May, and continue thereafter on the plan of "first come first served." The price of one of our Untested Queens alone is 75 cents, or with the old American Bee Journal for one year—both for $1.40. Three Queens (without Journal) would be $2.10, or 6 for $4.00. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage. You cannot do better than to get one or more of our fine Standard-Bred Queens.

George W. York & Co., 146 W. Superior St. **Chicago, Ill.**

Please mention Am. Bee Journal when writing.

FOR SALE

Queens and Honey. Also three Remington Typewriters. These machines cost, new, $100 each; they look like new, and work like new. Will take $35 each, or will exchange for anything we can use.

QUIRIN-THE-QUEEN-BREEDER,
BELLEVUE, OHIO

Please mention Am. Bee Journal when writing.

Mott's Strain of Italians!

Golden or R. C. Untested, 65c; Tested, $1.15. Natural Golden from Imported stock—Untested, $1.00; Tested, $1.50. See list.

NUCLEI. Leaflets—"How to Introduce Queens," 15c; "How to Increase," 15c—both, 25 cents. 4Atf

E. E. MOTT, Glenwood, Mich.

Please mention Am. Bee Journal when writing.

Comb & Extracted Honey

Write us when you have any to offer, naming your lowest price, freight paid Cincinnati. We buy every time your price justifies, and we remit the very day shipment arrives.

The Fred W. Muth Co.
"THE BUSY BEE-MEN"
51 Walnut Street, CINCINNATI, OHIO

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Just a Few Plain Facts as to Why You Should Join

The Michigan Bee-Keepers' Association

Two people working together are more than twice as strong as one. This strength multiplies as numbers increase. But numbers alone are not sufficient. There must be **Action.** And this action must be well directed, and with a purpose in view. If a number of people work together to attain a given object, it is next to impossible to prevent them attaining it. Hence, if a number of bee-keepers, in the form of an association, work together for better market conditions, success is almost certain.

And This is What We Are Doing

This fall the seventh annual booklet has been published. It gives the name, address, and honey report of each member. This booklet is then advertised in the bee-journals, and sent to all who request it. In this way each member is certain that his name goes before buyers all over the United States. The logical outcome is better markets, as each member is brought in touch with more buyers. This is proven by the fact that many of our members now sell as soon as, or before, the honey is ready to ship. A large percent have already sold this year's crop.

But We were Not Satisfied to Stop There

No, we went further and compiled a list of 100 buyers with addresses. We wrote each one of them asking what kind of honey they wanted, how put up, and how much. While not all replied, yet of those who did reply the demand was for **Over One Million Pounds of Honey.** This list was sent to each member, which enabled him to write at once to the buyer who wanted just what he had for sale.

Each Member Advised as to Market Conditions

The Executive Board then sent out to each member a recommendation as to what should be obtained for honey this year f. o. b. cars at producer's station. Reasons for this conclusion were also given. This meant much to the beginner who did not know what he should ask for his honey, after he had produced it. It also helped the old producer by preventing the new, inexperienced man from dumping his crop on the market at any old price offered.

Our Membership is Not Confined to Michigan

No, we now have members in twelve States. Some of the leading bee-keepers in the land are enrolled with us, as well as others who are just starting. Both find it profitable to belong to the Michigan. Our system of finding markets by mail helps all, no matter where they reside.

Membership from Now to Jan. 1, 1912, for $1

That is just exactly what we will do. It is now too late to have your name in this year's booklet, as it is already published, but we will credit your membership to January 1, 1912, which will include the next year's booklet. In addition, we will send you at once the list of 100 buyers, putting you at once in touch with new markets, and send you the Executive Board's recommendation in regard to markets.

Don't Forget that We are Growing

But the larger we are the more we can do for you. Your individual strength increases in proportion to the number you are united with. That is why we want you with us. And you should not hesitate to come with us. You have worked hard for your honey. Now that you have it, you should not hesitate to put in One Dollar with your brothers to work for better market conditions. Send in your Dollar at once, and get by return mail the buyers' names, the Executive Board's recommendation, and a certificate of membership in the livest bee-keepers' association in the United States. Booklet sent free upon application. Address,

Michigan Bee-Keepers' Association,
E. B. TYRRELL, Secretary,
230 Woodland Ave., DETROIT, MICH.

Don't Spoil Your Success at the 11th Hour!!

You and your bees have worked hard all summer to show results.
Your sections are now all filled with beautiful snow-white honey.
Your crop is in. You are ready for the harvest. Now is the critical period.

Be wise. Be careful. --- Insist on Lewis Shipping-cases --- made out of bright polished Basswood, accurately fitted --- complete with or without glass, neat, attractive, "nobby."
Make your Honey bring better prices by using them. Now furnished with corrugated paper in addition to the regular kind.

MANUFACTURED ONLY BY

G. B. Lewis Company, Watertown, Wis., 30 Distributing Houses

Bee-Keepers

Here is a bargain in No. 2
4¼x4¼ **1-Piece 2-Beeway Sections**
$3.25 per 1000. Plain, 25c less.

Send your order to-day. Also write for Catalog. 1Atf

AUG. LOTZ & CO.,
BOYD, WIS.

Please mention Am. Bee Journal when writing.

Queens Golden and IMPORTED STOCK!

Goldens mated to Imported Stock. If you want HONEY, try my Superior Strain.

Untested, 65c each; 6 for $3.50. Tested, $1.00 each; 6 for $5.50.
Safe arrival. No disease. 8Atf

N. FOREHAND, Ft. Deposit, Ala.

Please mention Am. Bee Journal when writing.

Scoggins Strain Bees!

To The People:

I have more orders for Untested and Tested Queens than I can fill this year. But I have a **Few Fine Breeders** that were reared this year. Price, $3.00 and $5.00 each.

J. B. Scoggins, Fouke, Miller Co., Ark.

Please mention Am. Bee Journal when writing.

DOOLITTLE & CLARK

Have some fine ITALIAN BREEDING QUEENS at $2.50, $5.00, and $10.00. Untested Queens, $1.00 each; $9.00 per dozen. Send for Circular

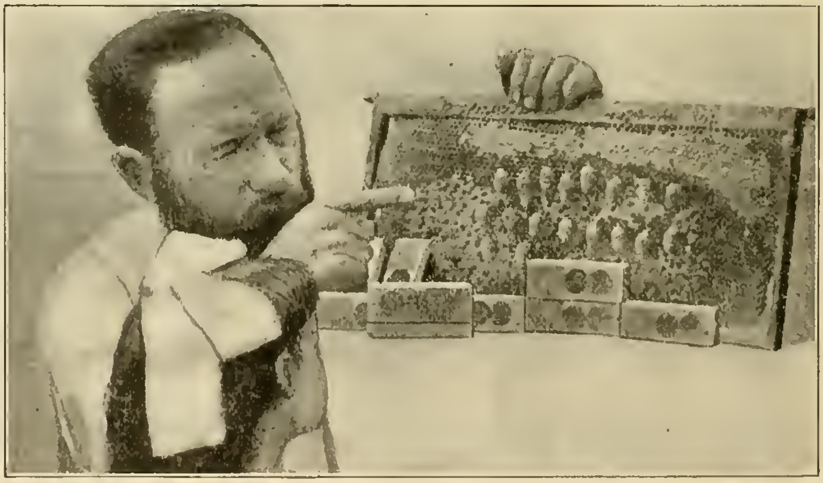
Borodino, Onondaga Co., N. Y.

Please mention Am. Bee Journal when writing.

QUEENS Golden, Red Clover, & 3-Banded QUEENS

Untested, 75 cents each; $4.40 for 6; $8.75 per dozen. Tested, $1.00 each. Queens sent by return mail. 6Atf

DANIEL WURTH, Rt. 1, Wapato, Wash.



We Are Still Here—Rearing Those Fine Superior GOLDEN ITALIAN QUEENS

If you want to get a larger crop of Honey than usual, get **Hall Superior Golden Queens NOW for 1911.** Untested Queens—1 for $1.00; 6 for $5.00; 12 for $9.00. Write us your wants.

T. S. HALL, JASPER, Pickens Co., GEORGIA.

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AMERICAN
BEE JOURNAL
L.L.LANGSTROTH
CHAS. DADANT

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

Published Monthly at $1.00 a Year, by George W. York & Company, 146 West Superior Street,

GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., SEPTEMBER, 1910

Vol. L---No. 9

Editorial Notes and Comments

Keeping Honey

All are not agreed as to some of the points about keeping honey, but probably all are agreed that it is a good thing to keep it warm. Some would say hot. If a cool, damp time comes, artificial heat may well be used. At other times the heat of the sun may serve, with dark walls and roof to absorb the heat of the sun.

What about ventilation? S. D. House, a man whose word deserves consideration, says in the Bee-Keepers' Review:

> "Comb honey needs a high temperature, with no ventilation, to cure it properly; the least it is exposed to the atmosphere the better, unless it could be in a direct current of air."

Perhaps something depends upon the comparative heat of the inside and the outside air. Suppose a door or window on each of two opposite sides of the honey-room, each opening furnished with a screen. Without doubt it will be better to keep everything closed tight at night, as the admission of the cool night air could only do harm. In the morning the closed room will be much warmer than the outside air. But it has cooled off to some extent throughout the night, and in the course of the forenoon the outside air will warm up until it is warmer than the air of the closed room. Will it not be well then to open up and let in the outside warmer air? Then after the middle of the day all may be again closed.

Improvement of Bees

From time to time the advice is given to breed from the best so as to increase the average per colony, yet probably only a small number of bee-keepers act upon the advice. In the average apiary it will likely be found that some colony produces double the average yield, while another does not produce half as much as the average. Indeed there may be found a colony which in an ordinary year produces nothing. And yet that non-producer is allowed to continue, because it does not enter the head of the owner that it is a loss to him. It is a loss in two ways. It consumes just as much stores as his best storing colony, provided the colonies are equally populous, thus using up what might be stored as surplus by other colonies. That is bad enough, but perhaps the greater loss occurs from the fact that the drones from this poor colony meet the young queens of the better colonies, thus bringing down the average yield for the future. So it might be a profitable thing to brimstone such a colony rather than to let it continue on its own way.

A little figuring may do no harm. Suppose an apiary of 100 colonies which average, one year with another, 75 pounds of honey per colony, which is sold at 8 cents per pound. Suppose the best colony in the apiary yields double the average, or 150 pounds. Now if the owner requeen his apiary with young queens of that best stock, and if each colony in the apiary then yields 150 pounds each; or, in other words, if he increases the average yield 75 pounds per colony, that 75 pounds at 8 cents a pound will be $6, and that will amount to an increase of $600 a year for the whole apiary. Would not $600 a year pay him pretty big wages for the work of requeening?

But that "if" in the case is to be reckoned with, and it may as well be said at once that no such result would follow. For future storing depends not only upon the young queens that are reared, but also upon the drones with which they are mated. If the bee-keeper rears all his queens from that 150-pound colony, and if all his young queens meet drones from his own apiary, these drones being of average 75-pound stock, then the resultant will be an average of 150 and 75, or 112½. That would make an average increase of 37½ pounds, or an increase of 3750 pounds for the whole apiary. At 8 cents a pound that comes to just $300. Even that would be good pay.

But again there is an "if." "If" his queens meet drones from his own apiary. They may meet drones from surrounding apiaries. Possibly these may be better than his own drones; probably worse. The larger his own apiary, and the fewer surrounding bees, the better his chances. If his apiary is of considerable size, he may improve his chances by encouraging drones only in his best colonies.

Although it may not be practical to reduce the matter to exact figures, enough is clear to show that the bee-keeper who has colonies of varying degrees of excellence (and that takes in nearly all bee-keepers), may make a tidy sum by giving attention to the rearing of queens from its best stock.

In many cases, however, the best colony in an apiary is nothing to boast of, and as a preliminary step one or several good queens should be purchased from some reliable dealer.

Longevity in Bees

Occasionally some one gives expression to the thought that longevity is an important factor in the bee-keeping world. Certainly a worker which lives a few days longer than the average would be expected to gather more than the average, provided the few additional days of its life be added to the length of time it spends as a fielder. But how are we to determine which bees have the longest lives? F. Dundas Todd, writing in the Bee-Keepers' Review, takes the number of dead bees found on the bottom-board in winter as an index, and says:

> "This summer, therefore, I am going to rear my new queens from the colony that showed the fewest dead on the bottom-board, and permit drones to fly from the hives that approached the nearest to the best."

As a general principle this may be accepted as correct, but there are things that make exceptions, and these things must be considered in making any decision. The colonies must be of equal strength to make a fair comparison. They must stop breeding in the fall at the same time. A colony that stops breeding in August ought to show a greater proportion of dead bees than one which continues a month or two later.

Why not measure the longevity of the workers by the longevity of the queen? If the queens of one strain of bees live longer than those of another strain, is it not a fair guess that there will be a proportionate difference in the lives of the workers? One man says his queens do their best work in their first year, and that he wants to requeen annually. Another says his queens do as good work in the second, or even in the third, as in the first year. The difference may be in the bees themselves. But the question still remains: If a worker lives longer than the average, will the nurse-period and the field-period be both extended, or will the extension apply only to the field-period of its life?

Few or Many Colonies for Greatest Enjoyment?

One of the brightest of apicultural writers of the present day is L. S. Crawshaw, who, under the title "Cappings of Combs" serves up regularly for the readers of the British Bee Journal a feast of good things. He generally confines himself to comments upon items that have appeared in previous numbers, and whatever writer makes a slip in any way is likely to be held up by the aforesaid Mr. Crawshaw. So reliable is Mr. Crawshaw generally in all his views, and so rarely does he lay himself open to criticism, that when occasion offers one can not resist the temptation to make the most of it, although one may be fairly certain of being gibbeted by Mr. Crawshaw for such temerity. Yet the gibbeting will be sure to be done with such good nature that the victim will feel that it is a favor rather than a punishment.

Mr. Crawshaw says this in the British Bee Journal:

> It is possible that some sort of belief obtains that happiness increases with possession even of bee-hives. May I assure those enthusiastic beginners this is by no means necessarily the case, but rather the reverse. In the first ecstasy of bee-delight a beginner is apt to outrun his powers. More true enjoyment can be obtained from one or two hives than from a large apiary. There comes a time when the work detracts from the pure pleasure of the amateur and the unalloyed delight of study. There is even a reduction in the record harvests which may be obtained from a few thoroughly-understood and properly-tended hives.

As a preliminary question, one may ask whether the enjoyment of the beekeeper is really in the possession of "hives," or in what the hives contain. In other words, has so accurate a writer as Mr. Crawshaw sufficient excuse for following the too common error of saying "hive" when "colony" is meant?

Passing that, however, as of minor consideration, let us come to the more serious part. Mr. Crawshaw desires to warn the beginner not "to outrun his powers," and so not to increase the number of his colonies faster than he gains ability to manage them. And in that he is quite right. But in trying to make him content with his present numbers is there any need to dampen unnecessarily the expectations of the beginner as to the future? Practically, Mr. Crawshaw says, "My young friend, make the best of the present, for you will not have the same fun out of bee-keeping when you have a larger apiary; what is now delight will become drudgery, and even the yields from your colonies will not be what they are now." Will not the poorer outlook for the future largely reduce the joy of the present? For the beginner's enjoyment generally has principal reference to the big things he is going to do in the future.

One can not help wondering whether Mr. Crawshaw is speaking from his own experience. If so, is it an average experience? Certainly it does not agree with the experience of the writer. Take that last statement in the passage quoted, the reduction in record harvests. That, of course, refers to the yield per colony. The writer had smaller yields per colony when he had only half a dozen colonies than when the number neared 400.

Note the fallacy involved in that "few thoroughly understood and properly tended hives." As who should say: "A man has only a certain amount of understanding. If it be divided among a few colonies it will cover the ground well, but if it be divided among a large number it will be too thin." In all conscience, if a man understands thoroughly what to do with one colony, will he not understand just as well what should be done with two, or with a hundred? Can he not tend the hundred or more just as well as he can tend the one, so long as the number is not too great for the time he has to devote to them?

Even if the yield should be less per colony, as it may be in some places, on account of the smaller pasturage per colony with the greater number, there is more real enjoyment in the thought of 5000 pounds from 100 colonies than in the thought of 1000 pounds from 10 colonies. At least that is the case here, whatever it may be in Mr. Crawshaw's "locality."

"There comes a time when the work detracts from the pure pleasure." The writer can not deny that there have been times when he has been so tried that he almost wished he might never see a bee again. But those times were the exception and not the rule; and after a good night's rest he was eager to get at the work again the next morning for the pure joy of it. Nor is it an absolute necessity that one should have so many bees that the care of them is beyond one's time and strength. One can have a smaller number, or more help.

"More true enjoyment can be obtained from one or two hives than from a large apiary." Does Mr. Crawshaw speak from experience, or where did he learn that? This deponent has now what might generally be considered "a large apiary," and although the time when he had only "one or two hives" stretches back nearly half a century the memory of the enjoyment he had at that time is still quite vivid, and he is ready to take this affidavit that the amount of true enjoyment from the "one or two" did not compare with that from the present number. The feeling experienced when contemplating a pile of several tons of snow-white sections leaves very much in shadow the delight in the returns from the few colonies, great as that delight was. The unsolved problems of the present day are struggled over with just as keen a relish as were the more elementary problems of 50 years ago.

No; let not the beginner be discouraged with the thought that as he advances his enjoyment will be less. Let him heed Mr. Crawshaw's warning not "to outrun his powers," and he will find it is better further on. "The best is yet to come."

Now, Mr. Crawshaw, bring on your gibbet.

Objections to Alexander Treatment of European Foul Brood

Alfred L. Hartl says in Gleanings in Bee Culture:

> "I have had no experience with European foul brood; but it seems to me that if the Alexander treatment is a success the disease would never have existed, for the bees would naturally cure themselves every year. All these writers agree that in the period of queenlessness, since no eggs are laid, and there are no larvæ to feed, the bees have time to clean every cell in the brood-area, since in the 27 days all healthy brood emerges. Now, does not this same thing happen every spring? The bees stop brood-rearing every fall, and begin again in the spring; and the colonies are not only broodless 27 days, but often for two months, even here in the South. The queen is present, but she lays no eggs. When spring comes the bees set to work cleaning the cells, and they not only clean them half way, but they polish them besides. A few days later the queen starts to lay in these polished cells, and she will not deposit one egg in a cell that is not perfectly clean. Now, does not this fulfill every requirement? Yet the disease is spreading over all the States."

If absence of brood be all that is necessary, then certainly European foul brood ought to be automatically cured during winter. But as Mr. Hartl says, it is on the increase, although winter, as ever, faithfully returns once a year. And if a broodless period of several weeks or months in winter does not effect a cure, why should it in summer? Yet the results of actual trial are not to be ignored, and if a sufficient number say that a cure has actually resulted from the treatment, it is hard to kick against facts. The question is: Has there been that sufficient number?

Foul Brood Conditions in Dr. Miller's Apiary

After the severe season of 1909, with European foul brood in most of my colonies during a season of dearth, it was a matter of no little interest to know in what shape things would be at the opening of the season of 1910. As was the case more or less throughout a large scope of territory, the season here was phenomenal. Phenomenal in having summer weather at the usual time of spring, and phenomenal in having everything frozen up somewhat later, the foliage being frozen on trees so that many of them were as bare as in the midst of winter.

As already intimated, it was with keen interest that the frames of brood were scrutinized at the first overhauling to see how much evidence of foul brood was to be found. What a delight it was to find all the brood healthy. Never before did the pearly whiteness of healthy brood look so beautiful. But would the disease appear later? Then there was the chance of fresh infection from diseased colonies on all sides of me, with no foul-brood law to do anything in the way of protection.

"Then came a frost—a killing frost," as already mentioned. Dead brood was found in some colonies. But it lacked the characteristic yellow color of European foul brood. It was nothing strange that such a freeze should cause chilled brood. Later on, however, dead brood was found that was unquestionably the result of European foul brood. Did it originate from seed left from the previous year, or was it introduced afresh from diseased colonies in surrounding apiaries? Dr. Phillips says the disease appears early in the season and later disappears. According to that it must have been introduced afresh from outside. But I would give quite a bit to be sure on that.

It may be remembered that last year I began treating the disease by brushing upon foundation, nearly all diseased colonies being treated in that way, and later on a few were treated by what I supposed was the Alexander treatment, although I unwittingly made a rather serious departure from it, giving a laying queen instead of a virgin queen after about 3 weeks of queenlessness. I can not tell the proportion of colonies of each kind that showed the disease this year; but I know that the disease appeared in colonies that had been brushed upon foundation as well as those that had been "Alexandered."

On looking through my book I find that at some time during the season there was found dead brood in 27 different hives. How many of these were cases of chilled brood I can not say now. Nearly all, however, were mild cases, only a few bad cells being found in a hive, in some cases only a single cell. Those who have no acquaintance with the disease may wonder how one could easily determine that only a single cell is to be found in a hive without a great deal of looking. It is an easy matter. That single colored larva stands out so prominently among the great throng that are dressed in pearly white that it will be detected at a glance.

In most cases where only a few bad cells were found, there was no need of meddling; the bees themselves cleaned up. Some of these were among the strongest colonies, and that they did not specially suffer is shown by the fact that they stored beyond the average in the apiary. And, by the way, the work of the bees at storing shows that the previous terrible season, foul brood and all, had still left the apiary in the finest condition, for I can say deliberately that I think I never before knew such storing up to the 10th of July. The condition of the bees was the best, and the flow of nectar was something wonderful. I was confidently expecting the record yield of my life. But there's no resisting long-continued drouth, a drouth so terrible as that of 1910, and July 10th the bees "struck" after having stored some 70 sections per colony, one colony having stored 160 sections. But instead of the 20,000 sections that I was somewhat counting on, I must be satisfied with some 6000, unless the fall crop helps out a little.

This year there was not the same desperate need as last year to make earnest effort to stamp out the disease as promptly as possible. Instead of that, all that I did was rather by way of experiment. No case was treated by throwing upon foundation, and in no case, in the few colonies that needed treatment, did I designedly leave them without brood as long as I did last year. I wanted to know, you know, whether they wouldn't get along with a shorter term of queenlessness.

As nearly as I can now tell, if a colony is reasonably strong this treatment will answer: Remove or destroy the old queen, and at the same time give the colony a virgin less than 24 hours old. That's all; the bees do the rest. Weak colonies must be united or strengthened. A virgin less than 24 hours old needs no caging; just drop it in the hive. At any rate, that treatment has cured, whether the colonies stay cured or not. C. C. Miller.

Miscellaneous News-Items

National Program for Albany

Secretary Scholl has prepared and sent us for publication the full program for the 41st annual convention of the National Bee-Keepers' Association, to be held in Albany, N. Y., Oct. 12 and 13, 1910.

The many most excellent papers by expert honey-producers from widely scattered parts of the country, together with question-box discussions, ought to make the forthcoming convention one long to be remembered for its genuine value to all who attend.

We had hoped, in this number, to mention quite a number of the leading bee-keepers who expect to be at the Albany convention. Of course, General-Manager France will be there; President Huffman, of the Wisconsin Association, expects to attend; Morley Pettit, Provincial Apiarist of Ontario, writes us that he fully intends to be there. No doubt there are many who will be unable to know definitely until perhaps only a few days before the convention whether they can attend.

We believe, however, there is going to be a large attendance, for eastern bee-keepers are good convention-goers, and there are a number within a radius of 500 miles of Albany that, no doubt, will attend, and who will help to make the meeting a memorable one.

Here is the program as outlined by Secretary Scholl:

PROGRAM OF THE NATIONAL BEE-KEEPERS' CONVENTION AT ALBANY, N. Y.

The National Bee-Keepers' Association will hold its annual convention Oct. 12 and 13, 1910, in the Common Council Chamber in the City Hall of Albany, N. Y.

There will be 5 sessions, beginning with the first on Oct. 12th, at 10:30 a.m., with an afternoon and an evening session the same day, and a morning and an afternoon session on the second day.

The papers selected are to take up not more than 5 minutes each, so that there will be sufficient time for the discussions of the subjects; and also allowing ample time for the "Question-Box," which is to be taken up at the conclusion of the subjects on the regular program at each session.

OCTOBER 12TH—MORNING SESSION, 10.30 A.M.

The first session will open with the reception of members, paying of dues, and such other matters, so these will not interfere after the regular program is taken up.

"Bee-Keeping as a Business"—W. B. Cavanagh, Hebron, Ind.

"What a Woman Can Do With Bees"—Mrs. S. Wilbur Frey, Sand Lake, Mich.

OCTOBER 12TH—AFTERNOON SESSION, 2 P.M.

"Comb Honey—from Nectar to Market"—S. D. House, Camillus, N. Y.

"Extracted Honey—from Nectar to Market"—J. L. Byer, Mt. Joy, Ont., Can.

"Bulk-Comb Honey and Its Future"—Louis H. Scholl, New Braunfels, Tex.

"Ripening Honey on the Hives"—W. P. Southworth, Salix, Iowa.

OCTOBER 12TH—EVENING SESSION, 8 P.M.

"President's Address"—George W. York, Chicago, Ill.

"Selection in Breeding to Increase the Honey Crop"—Geo. B. Howe, Black River, N. Y.

"Co-operation Among Bee-Keepers—Advantages and Procedure"—Frank Rauchfuss, Denver, Colo.

OCTOBER 13TH—MORNING SESSION, 9 A.M.

"Advertising to Create a Larger Demand for Honey"—F. J. Root, Newark, N. J.

"Methods of Retailing Honey"—Wesley Foster, Boulder, Colo.

"Shipping and Grading Honey"—H. H. Root, Medina, Ohio.

"Methods of Rendering Beeswax"—H. R. Boardman, Collins, Ohio.

OCTOBER 13TH—AFTERNOON SESSION, 2 P.M.

"When and How to Requeen with a Fall Honey-Flow"—F. A. Cyrenius, Oswego, N.Y.

"Southern Honey-Production—Present Conditions and Future Possibilities"—J. J. Wilder, Cordele, Ga.

"Bee-Keeping in Maryland as I See It"—N. W. Saunders, State Entomologist, Rockville, Md.

"Question-Box" after each session.

Louis H. Scholl, *Se*
New Braunfels, Tex.

We believe it will be a good thing for all who have any new implement or device that they think would be of interest to bee-keepers, to bring it with them to the convention. Some may have fine specimens of either comb or extracted honey that they would like to put on exhibition. No doubt they would have no trouble in disposing of it in the hotel, if they wish to sell it after the convention. All such exhibits are of great interest at such a gathering. So bring anything interesting that you have, and thus do all you can to make the convention as helpful as possible to all who attend.

The Hotel Kenmore, near the Union Station in Albany, will be the headquarters for the convention. The rates for rooms during the meeting will be $1.50 a day and upward; meals 50 cents, 75 cents and upward. Rooms can be reserved in advance by writing to Hotel Kenmore. Owing to the concessions made on the prices of rooms and meals by this fine hotel, it is hoped that just as many as possible of the bee-keepers attending the convention will "put up" there. It is so much nicer for all to be under the same roof during the intermission hours between the sessions of the convention. A large part of such a gathering is the social chats; the forming of new acquaintances and the renewing of old ones. Often as much of real value is picked up in short chats among bee-keepers between regular sessions of the convention as is given on the floor during discussions. This is because some of the best of those who attend conventions are so modest they will not "speak out in meeting," but will give privately a good many short cuts and interesting experiences that they would never think of when addressing the convention.

Foul Brood in Illinois

We have received the following letter from Mr. C. P. Dadant, president of of the Illinois State Bee-Keepers' Association. As it relates to the work of the inspector of apiaries for this State, it will be of interest to many of our subscribers. Mr. Dadant writes as follows:

HAMILTON, ILL., Aug. 9, 1910.

FRIEND YORK:—I have made enquiries as desired concerning the course to pursue with foul brood in Illinois. Mr. A. L. Kildow, our inspector, writes me:

DEAR MR. DADANT:—I don't know of any foul brood anywhere that is not looked after. As soon as I get word that there is disease in a locality, I try to lay out a route to take in that and the surrounding country.

Putnam, Ill. A. L. KILDOW.

To the foregoing I have replied thus:

"The Executive Committee of our Association realize the present great danger of foul brood, and urge you to continue, and, if necessary, extend your investigations, however, within the limits of our means as allowed by the State. We will back you in any reasonable expenditure which will help cover the State with remedial treatments wherever found necessary. Great care must also be exercised in the selection of men giving thorough treatment, for careless treatment is worse than useless."

Whenever you have information as to location of any disease supply it.

Yours truly, C. P. DADANT.

Mr. Dadant's last paragraph is for every bee-keeper in Illinois. If you suspect this disease in any apiary, report such apiary to Mr. Kildow at once. It is then his business to look after it.

Michigan Association and Honey-Prices

The next annual convention of the Michigan Bee-Keepers' Association will be held in Grand Rapids, Nov. 9 and 10, 1910. Full particulars of this meeting will be announced later.

The Michigan Association has now over 200 members in good standing, although 61 of the former members so far have failed to renew their memberships. There is no reason why Michigan should not have the largest association of bee-keepers of any of the States. We believe Illinois has something like 300 members, so very soon Michigan may be in the lead. We wish that every State had a strong State organization of its bee-keepers. Then if these, as well as other associations, were affiliated with the National Bee-Keepers' Association, all should form a strong combination, and be a great help to each other and to their members. Perhaps some future day will see such a desirable condition consummated.

The Michigan Association, through its Executive Committee, has sent to all its members a printed card suggesting the minimum prices that they should obtain for their No. 1 grade of honeys this year. This we believe will be a help, and should be followed by other State organizations of honey-producers. The National might then issue a statement based on the estimates put out by the various State Executive Committees. A combination of this kind ought to be a real help to all the members of the State as well as National associations. Why not work to this end by another year?

Here is the card prepared for Michigan last month:

August 15, 1910.

To the Members of the Michigan Bee-Keepers' Association:

We, the Executive Board of the Michigan Bee-Keepers' Association, after taking into consideration the crop reports and the general market conditions, make the following recommendations concerning the price our members should receive for their honey this year:

For comb honey, properly cased and crated, No. 1 grade, you should receive not less than 14c per pound, f. o. b, cars at your station in a wholesale way. Where the member is developing a private trade, and is selling direct to retailers, he should then receive not less than 16c per pound.

For extracted honey put up in 60-pound cans, No. 1 grade, you should receive in a wholesale way not less than 8c per pound f. o. b. cars at producer's station. In small lots you should receive at least 9c.

These prices are minimum prices, and are based on your having a strictly first-class article. Off grades would be less. At the same time we urge every member to strive to advance his local market, and where personal effort is put forth to sell in a retail way, an advanced price should be obtained accordingly.

You are also to understand that in many cases bee-keepers are receiving more for their honey than the prices advised above, and that these prices are given only to guide you as to what you should get in a wholesale way.

Our decision is based on the short crop reported for Michigan; on crop reports from other States producing a similar grade; on the excellent grade of honey produced in Michigan this year; and on the increased demand for honey from members of our Association, many members already reporting their crop as sold.

Respectfully submitted,
L. A. ASPINWALL, *President.*
E. D. TOWNSEND, *Vice-President.*
E. B. TYRRELL, *Secretary.*

Our Front-Page Pictures

The 3 pictures on the front page of this number of the American Bee Journal are briefly described as follows:

Nos. 1 and 2.—California Scenes

I send you a snap-shot of a portion of an apiary of 200 colonies which I superintended, and in which I did all the work myself, including the nailing and painting of 200 8-frame dovetailed hives and supers.

I also send a picture of a large sycamore tree at the Soldier's Home, Los Angeles Co., Cal., where the first sermon was preached in Los Angeles Co. The founder of the old missions, Father Juniparo Serra, preached to several hundred Indians there.

Santa Barbara, Cal. DELOS WOOD.

No 3.—Home Bee-Yard of Miss Candler

EDITOR YORK:—The picture shown is one of what I call my home yard, although it is situated, really, nearly a mile from my home.

It is located close up against a high hill which protects the yard from the north and northwest. The colonies all have double brood-chambers, 10-frame Langstroth size, and each is closely and snugly wrapped up in black tarred felt-roofing paper.

On top of each hive, under the paper, is a 5-inch deep super filled with sawdust or planer shavings. A bee-escape board on the hive is the sealed cover immediately above the bees.

The paper cover is in two parts, sides and cover being separate. The sides reach to the top of the upper brood-chamber, and the top, or cover, is folded down to telescope a little over the sides, and then fastened down with a lath and nail on each side.

I am very careful that everything is as tight as possible at the top, so there can be no draft through the hive, or the warmth escape. For ventilation I leave the bottom open the full width of the hive. Unless this is done the combs become moldy, and the bees get the dysentery in these tall hives.

This method of winter protection has been very successful with me. It is quite a bit of work, but the work is not heavy as is the packing of bees in clamps and winter-cases, and I can do it alone, if necessary, and have often done so. The paper can be laid away in the spring and may be used over and over again, with careful handling, and by folding in the same creases.

(MISS) MATHILDA CANDLER.

Cassville, Wis.

Ralph Benton, Prof. of Biology

The Oakland, Cal., Enquirer of Aug. 3, 1910, reports that Ralph Benton, instructor in the department of entomology at the University of California, had tendered his resignation to accept the position of professor of biology and nature study in the Los Angeles Normal School, and would assume his new position with the opening of the fall term, this month. Mr. Benton had been connected with the faculty of the University of California for the past 5 years, first as Assistant in the department of agriculture, and later as instructor.

"All Aboard for Albany!"

There are already a number who are planning to join the special carload of bee-keepers to start for Albany from Chicago at 10:30 a.m. Tuesday, Oct. 11. Jacob Huffman, president of the Wisconsin Association, expects to be with us. Mr. Morley Pettit, Provincial Apiarist for Ontario, will likely join us at Buffalo, and, doubtless, there will be many prominent bee-keepers who will "get aboard" the car all along the way. As announced last month, the round-trip ticket from Chicago, at that time, to New York via Albany will be $28.20, the tickets having a 30-day limit. Stop-over privileges, either going or coming, may be had at Toledo, Sandusky, Cleveland, Ashtabula, Erie, Buffalo, Niagara Falls, Rochester, Syracuse, Utica, Schenectady and Albany.

Between Cleveland and Buffalo, and also Albany and New York, in either direction, you can have your choice between railroad and boat. Of course, all will want to take a boat at least one way on the Hudson River between Albany and New York.

Those who wish to go to Boston instead of New York City, can get a round-trip, 30-day limit ticket for $29.60 from Chicago with the same privileges as the New York round-trip ticket mentioned before. The round-trip rate from Albany to New York, either by rail or boat, is $1.00.

As announced before, the sleeping-car berth from Chicago to Albany will be $4.50, or $2.25 each, when two occupy the same berth.

Please remember when getting your

tickets to see that they read over the Lake Shore and Michigan Southern railroad from Chicago to Albany or New York City, as the special rate of $28.20 for the round-trip ticket includes New York City; or for $29.60 it would include Boston instead of New York City. This will be a fine opportunity for all who desire to do so, and have the time to spend, to take in Boston, New York City, Philadelphia and Washington with very little additional expense. It would seem too bad to be so far East and then not visit as many as possible of the large cities, and also points of great historic interest.

We believe the Albany convention is going to be one well worth attending by every bee-keeper who can possibly arrange to go. We are hoping that it may be the largest and also the best of any yet held on the American continent. As its President, we invite the co-operation of just as many of the honey-producers of this country, and also other countries, as can arrange to be present.

As mentioned last month, we are ready now to make reservations in the special car for all who wish to go to the convention with us. Address this office, or G. K. Thompson, General Agent of the Lake Shore and Michigan Southern Railway, 180 S. Clark St., Chicago, Ill., for any additional information desired concerning the special car.

Surely, out of a membership of nearly 4000, there should be at least one carload of bee-keepers from all the territory south, west, and northwest of Chicago to assemble here and go on together. It will be the "time of your life" if you can be in that car. Those who were so fortunate as to be in the special car that went from Chicago to Los Angeles, and also the one from Chicago to San Antonio, will never forget the pleasure of those trips. The one to Albany will be like unto the others. There is nothing equal to a carload of bee-keepers for genuine enjoyment when they once become acquainted. And it does not take long to know each other pretty well after starting out on a thousand-mile ride together. Better decide to go and join the carload, if you can.

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Convention at Rockford, Ill.

The annual meeting of the Northern Illinois and Southern Wisconsin Bee-Keepers' Association will be held in the Court House in Rockford, Ill., Tuesday and Wednesday, Oct. 18 and 19, 1910. All are cordially invited to attend, and bring anything new that would be of interest in bee-culture.

B. Kennedy, *Sec.*

Cherry Valley, Ill.

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An Honorary "A. B."

In the matter of college degrees it is worth while recalling the *bon mot* of Senator Hoar when Harvard hesitated about giving an honorary A. B. to a prominent citizen who had never been to college. "He best deserves to be called A. B.," was Senator Hoar's argument, "who brings most honey to the hive."

Sketches of Beedomites

CHAS. H. WEBER

The subject of this sketch was born Sept. 19, 1879, being the only son of the late C. H. W. Weber, of Cincinnati, Ohio. From early boyhood he imbibed his father's honorable methods of doing business, which he is now putting to good use. As he grew older the responsibility of the business was on his shoulders, while the elder Weber pursued other interests. The strict principles which were part of his early training have made him an honorable, courageous business man. His will is indomitable, and being mixed with a good supply of "gray matter," also having an eye that looks ahead—all these combined with an indefatigable energy, have caused Mr. Weber to climb the ladder of success very rapidly.

Chas. H. Weber.

It is just two years since he assumed complete control of the C. H. W. Weber & Co., and the many friends that he has made in this short time have learned to appreciate his straightforward, candid way that characterizes all his dealings. They know him to be "true blue," and thus rely on his every word. They like to call at his place of business, where he is always willing to show them everything; and then, too, they like his pleasantries, of which he always has on hand an inexhaustible stock.

The same qualities that are to be admired in Mr. Weber's business life make his private and home life beautiful. While he seems to have a rather stern exterior (which is nothing to fear), it is only through long acquaintance with him that one comes to see the fine qualities that he seems to insist on keeping in the background. The simple life is the life for him, and as in his business—to which he applies himself so steadily—so in his home life is he steady, happy and delightful.

Mr. Weber's loyal sister "Alma," in a letter to us, says that her brother "is just about the finest man in the world;" and one "can not say too much good about him." She certainly is a sister worth having.

Mr. Weber managed the seed and honey business for his father for 8 years, and the last 2 years he has conducted it for the Company, of which of course, he is the largest part. He has been very successful all along the way, and has as chief assistant his sister Alma, who takes care of the correspondence, etc. While the seed and bee-supply business is rather extensive. C. H. W. Weber & Co. are perhaps the largest honey-bottlers in the United States. Their present capacity permits an output of 2000 to 3000 pounds of bottled honey daily. Last year (1909) they handled from 25 to 30 cars of extracted honey, and 6 to 8 carloads of comb honey. This surely is "going some" in the honey business.

It was our pleasure to visit Mr. Weber at 2146 Central Ave., Cincinnati, Ohio, last fall, when we called on a number of the leading bee-supply and honey dealers of this country. It was indeed a pleasure to meet him, and to see how interested he was in explaining everything connected with his business, even to the minutest detail. His name is Chas. *H.* Weber, and if the "H." doesn't stand for "Hustler" it ought to, for he certainly is a Chas. *Hustler* Weber.

We were surprised not only at the facilities we saw in handling every part of the business of Chas. H. W. Weber & Co., but to learn of the wide extent of territory covered by their shipments. Mr. Weber certainly is doing his part to sweeten the public, and to get his share in his various lines of business. Being only 31 years of age this month, he is but beginning his business career, which, we trust, may be ever-increasing throughout a long and successful, happy life. It is a pleasure for us to write all this about one who deals honorably, and strives for success in a true and noble way. We believe Mr. Weber deserves all the success that is coming to him in these business years of his life.

"Scientific Queen-Rearing"

No other book compares with this one written by Mr. G. M. Doolittle. He is an expert in the business. It tells just how the very best queens can be reared. Bound in cloth. By mail, $1.00; or with the American Bee Journal, one year—both for $1.60. In leatherette binding, 75 cents, postpaid; or with the American Bee Journal one year—both for $1.25. Send to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Preparing Bees for Winter

This is my first year of bee-keeping. Would you give me some advice in the American Bee Journal as to preparing my bees for winter? They are in chaff hives, and must stay out-of-doors.

I have 4 colonies, 2 with young queens and 2 with queens at least a year old. There has been a drouth here most of the summer, and the bees are not getting much.

August 3. Illinois.

Perhaps the greatest advantage claimed for chaff hives is that that they are already prepared for winter, or very nearly so. The double walls are already packed with some loose material, such as chaff, forest leaves, or planing-mill shavings, so that no attention need be paid to them. But you must see that the top is covered up warm. A cushion containing packing material is needed on top, although some think a tray better than a cushion. Then the entrance must be contracted. In summer it can hardly be too large, but in winter it should be only about ⅜ of an inch deep and about 8 inches wide for a strong colony, and smaller for a weaker colony. Not a bad rule is to allow an inch of entrance for each frame in the hive covered with bees. With the top covered over warm, the entrance of the right size, and the bees located where the blasts of winter do not blow upon them too fiercely, you may leave them with the hope that the winter may not be too severe, and that they may have an occasional chance for flight. But the likelihood is that if you keep in the business many years you will plan some way to cellar your bees in winter. Still, some winter outdoors successfully in very cold places.

Dividing Colonies—Melting Comb into Beeswax—Workers Killing Off Drones—When to Take Off Honey

1. I had a hive in which there were a very great number of bees, so I took the upper section and put it on an empty hive. I left 2 supers of honey in the section. There are very few bees in the new hive, and they do very little work. They are not working down in the hive. Shall I get a queen to put in this hive?

2. How can I melt the wax-combs? I put them on the stove, but they would not melt.

3. Do the drones kill the workers, or do the workers kill the drones?

4. Is August a good time to "rob" the bees? Mrs. R. Smith.

Detroit, Mich., Aug. 4.

1. If there was no brood in the upper section, and you took only the bees, of course they could do nothing. If you wish to divide the colony, take 3 or 4 frames of brood with the adhering bees and put them into the empty hive. In a day or two give them either a sealed queen-cell or a queen.

The probabilities are that you had better have left the colony just as it was. It is the strong colonies that give the best results.

2. Take a dripping-pan and split one corner open. Put your combs in this, and put it in the oven of the cookstove with the split corner projecting out. The opposite corner—the one farthest in the oven—raise slightly by putting a pebble or something of the kind under it, so the melted wax will run outward. Set a dish under to catch the dripping wax. This does very good work when only a small quantity of wax is to be melted.

3. At the close of the honey harvest the workers drive the drones from the hives. The drones never make any attack, nor indeed do the poor things ever make any defense when attacked.

4. As soon as your honey is capped over it can be taken from the bees. This may be even in June.

Tea-Pot for Melted Wax to Fasten Foundation

"My John" used the pan and spoons, too, but in moving to a new location pan and spoons were left behind. So when John's "better half" was asked to get some hives ready she found pan and spoons lacking. O, what will she do? The babies will wake up soon. O, there is an extra tea-pot, and with a wooden handle, too. So hive after hive was filled without setting the tea-pot down, as the cover on the tea-pot helped hold the heat.

Now some kinds of "spooning" are all right, but for fastening foundation in frames, give me a tea-pot. Mrs. M. W. Parker.

We formerly used with considerable satisfaction a tin cup with a spout, which would be much the same as a tea-pot. Your tea-pot had the advantage of a cover. Something depends upon the kind of spout the tea-pot has. A short and rather open one is good. One that is long, with a small orifice, allows the wax to cool at the extremity and fill up so it will not run unless the wax be kept too hot for best work.

Beeswax and Salt for Flat-Irons

"Beeswax and salt will make your rusty flat-irons as clean and smooth as glass. Tie a lump of wax in a rag; when the irons are hot rub them first with the wax-rag, then scour with a paper or a cloth sprinkled with salt."

"Why Bees Fear Smoke"

Dear Miss Wilson:—Such is the heading of an editorial on page 214, and it is a question which has been touched upon many times, and is designated as a conundrum. They say a whole lot about bees *fearing* smoke, and want to know the why and the wherefore, but "have not yet the true answer."

In my opinion, there is no answer, simply because there is no fear. I don't think the bees fear smoke any more than we do; they just simply can't stand it. The smoke strangles them, however little is used, and they try to get away from it (if they are gentle), or fight the cause. If a medium amount is used they get busy and try to gather up their jewels and put them in a safer place. If too much is used, and they have no time to protect their stores, they go to fighting the author of the disturbance.

The idea of our plucky little bees being *afraid* of anything! They may be *alarmed;* smoke may warn them of approaching danger. No condition of life is free from the visitations of alarm, no life can exist without it. It is not fear, we may know no craven shrinking from danger, yet be greatly alarmed. The fireman will know no fear as he rushes through the flames to save a life, but he will feel alarm when he sees a human figure in a flaming building. The soldier knows no fear as he arouses the sleeping camp to resist an invasion, but he is alarmed at the sight of the enemy in the still night watches.

I have heard it said that bees are afraid of thunder, thumping on the hives, and a thousand and one different ghosts. Don't you believe it. They are only alarmed, and ready at all times to protect their home, their baby sisters, and their hard-earned stores, at the slightest sign of danger, even to the giving up of their hives. Heroines, they are, every one of them, as courageous and self-sacrificing as you will find anywhere, and should awaken not only an admiration, but the desire for emulation.

If the fear of smoke could be inbred, or did associate it with the destruction of the colony, I think that man would have a very small chance of procuring any honey at all; for would not the "fear" of man be inbred with a far deeper impression than that of smoke?

"Fortunately it does not so greatly matter," says Ye Editor, but then research after these smaller matters has resulted in the discovery of deeper things. It is these little, insignificant matters that make up the monstrous ones in every walk of life.

Eola, Tex., July 21. (Mrs.) M. E. Pruitt.

Bee-stings On a Greenhorn

My first bee-sting was received this summer, after I had walked, without a veil, barefaced and bareheaded, all through an apiary where I was a stranger, and had examined the populated hives both externally and internally. After doing so, I requested the bee-keeper to let us sit in the shade some 30 feet in front of the first row of hives. We had not remained sitting over 5 minutes when a watcher became suspicious of us, circled our heads a few times, sounded the alarm, struck the bee-keeper in the face (although he wore a veil, as he said, "to intimidate the bees"), but not stinging him, turned like a flash and stung me on the small front lobe of the ear. Miss Bee was immediately joined by others that refused to permit us to remain on the spot, and finally drove us away. Which proves that they are more suspicious of a loiterer than of one who fearlessly goes into their midst.

My next sting was received on the left ankle (ah, ye provident deliverer! that ankle had been a chronic rheumatic for years) one night recently, about 11:30 o'clock, while I was attaching some feeders by the light of a lantern, which attracted, and I accidentally crumpled the gentle little lassie, which she decided was either danger or insult enough to risk her life for in her excitement; so she shot into me the fatal harpoon, which Nature gave her for defense.

Later I bought some colonies from a "blacksmith," or perhaps more appropriate, a "carpenter," because when preparing to attach an Alexander feeder which necessitates sliding the brood-chamber backwards, while leaving the bottom stationary, I found the bottom securely attached with nine 8-penny nails driven from beneath and with heads sunk. Well, when my husband finished ringing down plagues upon, and subjecting the "blacksmith" (who was 5 miles away) to the withering torments of fire and brimstone (for me), we prepared to extract the nails. By the time we had succeeded we were righteously indignant—so were the bees. And the bees were more furious than robbers — so were we. I had worked with sleeves rolled to my elbows, and 8 stingers in my left arm were my portion, although my "inferior officer" received none. They never sting him.

Only a momentary pain resulted from the ankle sting. I scraped out the stinger which had passed through a medium winter stocking, and to which she had left an abundant supply of intestines. I forgot the sting till the next day, when, after walking 3 miles to my office, I felt considerable pain in the ligament of my ankle after sitting a while, and which made me limp the balance of the day.

The ear sting pained me sharply for 5 minutes, and remained slightly painful the next day, but the ankle sting felt like the prick of a needle, entirely disappeared for 2 minutes, then burned acutely about a minute and disappeared to return the next day, as aforesaid.

Only one of the 8 arm stings hurt, or even swelled, although my husband scraped out the one, also, which did the damage. This shows that there is variety in stingers—as well as women's hats. MRS. FREDERICK GRIFFITH.

Kansas City, Mo.

A Cheeky Treatment of a Bee-Sting

In Ireland they have what is known as County Instructors in bee-keeping. They go about visiting bee-keepers and helping them to a better way of caring for their bees. Mr. M. H. Read, M. A., is the Honorable Secretary of the Irish Bee-Keepers' Association. Recently, on one of his jaunts about the country, he called on a bee-keeping friend who has few opportunities of attending his bees. He tells about his visit to this particular place in the following paragraph:

"On explaining the object of his visit, his friend's sister and another lady friend join him, and off they go to the apiary, where he adjusts the veil on one of his companions. Though he assures them that there is small danger of stings on so favorable a morning, they maintain a respectful distance, till interest in the operations, and his cool and confident manner, lure them to nearer views. Soon, however, an inquisitive bee is treated rudely, and forthwith shows resentment by stinging a soft cheek and then worrying in the abundant hair. She with the veil answers not to the pathetic appeal, but retreats further. Our knight errant, being a man of courage and resource, soon slays the wicked bee, removes the sting, sucks the wound and applies ammonia and soothing words. The treatment is so eminently successful that his offer to repeat it would doubtless have been accepted but for a meaning cough from the veiled beauty, and the naughty little twinkle in his eye. We need hardly say that this apiary did not suffer from subsequent neglect."

It is too bad a snap-shot picture could not have been taken of Mr. Read and his friend's sister while the former was sucking the wound from the bee-sting on her velvety cheek. Of course, he did not neglect that apiary afterward! Perhaps the accidental stinging became habitual, followed by the peculiar and somewhat osculatory treatment.

Doing Good Work.

The American Bee Journal is doing good work. I would not have made as much out of my bees this year had it not been for the American Bee Journal. EARL TRUSHEIN.

Canadian Beedom

Conducted by J. L. BYER, Mount Joy, Ontario, Canada.

Weather Conditions—Honey Crop

The weather conditions outlined on the first page of the August Journal, applies pretty much to the way we have had things here in Ontario during the past season. One big difference, however, is the fact that you had *three weeks* of a heavy flow, while here we had just about 6 days, and that right at the start of the clover flow, when so many of our colonies were not ready for the flow. And then, to talk of "half a crop" after "three weeks heavy flow!" Really, you ought to be ashamed of yourself for talking that way! During the 8 years I have been keeping bees for a "living," only once have we had a continuous flow that long that amounted to anything. A year ago, nearly all our honey from clover came in in about 10 days, and we averaged a good 100 pounds per colony. Now, if this had happened in Illinois, the Editor would have called that a *quarter* of a crop, no doubt, when he dubs a three weeks *heavy* flow as *half* a crop! Why, here we called the 100 pounds a *full* crop, even if it did all come in 10 days.

Come to think of it, gentle reader, no doubt our Editor is so elated just at present over that "queen" he has just captured, that he can not appreciate such small favors as a "half crop" of honey from a "three weeks heavy flow." Well, under the circumstances, we'll excuse him, this time.

Keeping Bees for a Living

That article of J. C. Frank's, in last American Bee Journal, reminds me quite forcibly of a convention held in an eastern city not so very long ago, when a certain gentleman challenged the idea that any one was making a living exclusively from bee-keeping. The said gentleman, if I am correct, followed a number of callings, for in addition to being an editor, a poultryman and a bee-keeper, he also was a minister of the gospel. In so far as I can remember the reported incident, no one called the bluff—for a bluff it was, pure and simple.

Just on the spur of the moment I could name at least a dozen men right here in Ontario who depend exclusively upon bee-keeping for a living, and who do not get disappointed in their expectations, either. No doubt this same condition is true in nearly all the States of the Union, although it is bound to be so more in some States than in others, owing to some places being better adapted to bees than are some others.

Of course, our friend might retort that these men all do some other work as a help in making things go, in addition to keeping bees. Perhaps so; and in just the same way almost every professional man will have some hobby, which incidentally will yield him a little revenue, yet said hobby would not lead us to say that a medical doctor does not make a living from his chosen calling, simply because he does some other odd jobs by the way of recreation as well as profit.

In my own case, I would say that for 8 years I have depended upon bee-keeping for a living. Previous to that I was on the farm at home, yet all the time having the bees in a smaller way because of a liking for them. However, in the 8 years named, I have had a kitchen-garden in which many a happy hour has been spent, and in addition some revenue has come in as well, in the way of food products grown for the table. I have also kept some hens to supply us with eggs and chickens for the table by way of variety. Then, again, as most of the readers know, I have a weakness for scribbling for the bee-papers, said weakness yielding me a lot of pleasure, and at least enough money to keep me in whiskey and tobacco! Yet, if asked how I make a living, the answer would surely be, "Why, by keeping bees, sure!" If any of my neighbors were asked the same question about me, they would be sure to make the same answer, although they all know that I keep a few hens and a small garden.

Yes, there is no doubt that many hundreds of men, and *women*, too, are today making a living out of bees, and although bee-keeping is not a get-rich-quick business, yet it is an occupation fraught with so much real pleasure that I verily believe the great majority of the fraternity would certainly choose the same calling in life again, if such a thing were possible, and we had this life to live over again. Here is one at least that would do so, as I have never yet seen a man who had a job that appealed to me quite as much as the one I am at. Of course, lots of other fellows make more money, but more money can only bring pleasure (very often it brings the opposite), and if one gets all the pleasure first-handed in the business he is engaged in, wherein lies the advantage of making more money?

Superseding Queens

Harry Lathrop reports that, as a rule, not more than 10 percent of his queens are carried over from one year to another. I wish he would tell us how he gets such sensible bees, as during the past 4 years, with bees left to their own devices in the way of superseding, very little swarming taking place, about 40 percent of the queens each spring have been found with clipped wings, showing that they were 2 years old—in some cases a year on top of that, too. In the majority of cases the 2-year-old queens are just as good as the yearlings—often better, yet sometimes there are some that would better have been superseded the year before.

I can not explain the difference in

actions of bees, as I use a large hive, and nearly always have very populous colonies during all the season. Whether a bit of Carniolan blood has anything to do with the longevity of the queens or not I am not sure, although I rather suspect this to be the case, as I had a queen of that race that was kept as a curiosity till she died at the age of 7 years. Up until the last year before her demise she gave good service, and I wish to say that there was no possible mistake in her age, as she was clipped and kept track of from the day she was purchased.

Since writing the foregoing I have been "going through" a number of colonies for the purpose of hunting out the old queens and putting in cells ready to hatch, that I have been rearing myself in my first attempt at grafting cells *a la* Doolittle. Whether the peculiar season or something else is the reason, I find that wholesale superseding has been the rule this summer, and I failed to find a single old queen in all the colonies examined; and to make room for the cells, I had to kill some young queens that were of an inferior nature.

Rearing One's Own Queens

Now that I have mentioned queen-rearing, I will have to tell of my first attempt at this phase of bee-keeping, for after rearing *one* batch of cells of course I feel quite confident about advising others how to do the work!

While I have, in years past, read a good deal of literature on the subject of queen-rearing, yet for various reasons I have never attempted to undertake the work, and have, instead, bought all the queens required. One reason for this is that I am sort of a rough-and-ready bee-keeper, partly by nature and more so by force of circumstances in which all my bees were bought in different sizes of hives, at a time when cash was such a rare article in my possession that a dime looked as big as a cart-wheel. It is the old story of "we first endure, then pity, then embrace," and I gradually got along with such a mixed outfit so well that I did not mind it so very much.

Anyway, aside from all these little matters, I looked upon such an operation as transferring the tiny larvæ from the cells as too delicate an operation for my clumsy fingers, and even when Mr. Clark, of Borodino, donated to me all the queen-rearing fixtures he brought with him to Toronto to illustrate his address with, yet that failed to stir me up to try the plan.

About Aug. 1st, Mr. Sibbald wrote me what "fun" he was having in rearing his own queens, and he said I ought to try it myself, as there was no reason but what I could do the work. A few days later I met him in Toronto, and again he mentioned the subject to me, and before parting I got his promise that some dipped cells would be sent me by mail in the course of a few days. The next day they came, and while I had the notion on, queen-rearing had to proceed even if all the other work came to a stand-still.

A few days before that a queen had been killed in attempting to introduce her to a vicious colony of blacks, and I was looking to this colony to have cells started to supply me with the royal jelly for grafting purposes. When the colony was examined imagine my disgust to find that only 3 or 4 stubby cells were being pulled out over some larvæ so old that the bees were about ready to cap them over before they thought of making queens out of them; and as for royal jelly—well, all I could scrape up out of the lot would go in your eye. However, such a small matter as that was not going to discourage me, and before giving up I would have used some *axle grease* to hold the larvæ in the cells, for really I found it hard to place a larva in a cell-cup with nothing to draw it from the transferring tool. (I wonder if that is not one of the main uses of the jelly in artificial queen-rearing.)

After getting what little jelly ready that was available, a comb of just-hatching larvæ was brought in from the colony that has headed the yard for 2 years. The day was warm and very dull, and say, didn't I have a time to see the very small creatures curled up in the bottom of the cells? Doolittle says to pare down the cells so as to get at the larvæ better, while Roots say it is not necessary. Having only a dull jack-knife handy, the paring was not done, and the fishing was done at long range.

As I was fishing them out with a small wooden paddle, hastily prepared, the thought came to me, Wouldn't Clark, or Adams, or some of the other experts, grin if they could see me working as I am?

After going all over the sticks of cells prepared, for the life of me I could not tell if I had missed any or not, as the day was so dull it was a task to see the very small larvæ in the cups after they had settled down in the bit of jelly. To make sure, I went over some again, and I am pretty certain that some cells had at *least 2* larvæ in them. The one stick of cells was given to the fool colony that did not know how to rear their own cells when they had a chance, and the other stick was given to a young swarm that had just lost their queen on her mating flight.

That evening I told Mrs. Byer that it would be a surprise to me if a single cell was accepted; yet when I retired at night I must confess to a feeling of curiosity as to what would be the outcome.

Next morning, about 10 oclock (I couldn't wait any longer), the young, queenless swarm was looked into, and lo and behold! *every* cell was accepted, and the tiny larva, in each, just floating in royal jelly! Later, one of the larvæ died before the cell was completed—whether of measles, mumps, or some other infantile complaint I know not; or perhaps in my clumsy transferring operation I gave the poor thing a solar-plexus blow, causing an injury that developed into acute indigestion.

The other colony had accepted only 5 out of the 9 cells, but in this case all blame was placed on the colony—they really did not know enough to build cells, even with my expert help!

Ten days later the cells were put into colonies made ready for their reception, and, for lack of confidence in my operations, 2 cells were given to each colony. Two days later *every* cell but one had hatched out, and that one was encased in comb that the cell-building colony built all around and over the cell. A bee-keeping friend took the comb and cell home with him, and he intends to cut away the comb and see if the queen is alive in the prison or not. He has promised to 'phone me just as soon as the result is known for a surety.

Needless to say after such luck I felt like throwing my hat and yelling, "We done it!" But on more serious reflection I refrained from such demonstrations, for fear it was just "luck" this time, and very likely such results would not be obtained next time.

In all seriousness, it is a source of satisfaction to know that one can do a thing if it is necessary, and while I shall likely continue to buy a good many of my queens, yet it is handy to be able, in case of emergency, to know how to do the work on a small scale myself.

Light Honey Crop in Ontario

Ontario has a rather light honey crop this year—would be *very* light were it not for the fact that some parts of eastern Ontario have a very bountiful crop. Generally speaking, from Toronto west, the crop is light, while the farther east one goes the better it is. I note that the northeastern States have a good crop, so quite likely all the eastern provinces of the Dominion will be sharing well, too. Prices are good—in fact, a little higher than last year, and no one when buying seems to think that honey has gone up as much as other food products.

At the time of this writing (Aug. 22d) we are having a good honey-flow from buckwheat.

"Bee-Keepers' Guide"

This book on bees is also known as the "Manual of the Apiary." It is instructive, interesting, and both practical and scientific. On the anatomy and physiology of the bee it is more complete than any other standard American bee-book. Also the part on honey-producing plants is exceptionally fine. Every bee-keeper should have it in his library. It has 544 pages, and 295 illustrations. Bound in cloth. Price, postpaid, $1.20; or with a year's subscription to the American Bee Journal—both for $1.90. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

"The Amateur Bee-Keeper"

This is a booklet of 86 pages, written by Mr. J. W. Rouse, of Missouri. It is mainly for beginners—amateur bee-keepers—as its name indicates. It is a valuable little work, revised this year, and contains the methods of a practical, up-to-date bee-keeper of many years' experience. It is fully illustrated. Price, postpaid, 25 cents; or with the American Bee Journal one year—both for $1.10. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

Carloads of Bee-Keepers for Albany

That carload of bee-keepers sounds so well that it is impossible to resist the temptation, and everybody that can crawl on that car should certainly get on. If there's not room enough on the inside then hang on the outside, just so you keep together in the same crowd, for, remember, that you will miss some fun of your lifetime not to hear everything that is going on in that crowd. May we hope that this will not be the only car that will be en route to Albany, but that there may be several others from other directions besides Chicago.

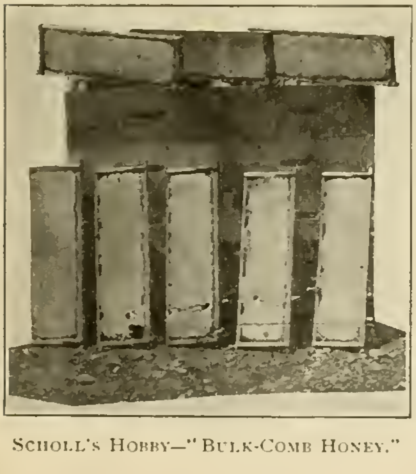
The location of Albany, and the advantages one can have from the trip by stopping off en route when returning home from the convention, should assure quite an attendance from the West. How about it? Is it not cheaper to get two carloads than if only one carload is gotten up? Two colonies of bees, if one buys them at one time, are generally a little cheaper; there is a reduction on two or more. Two cars from the West—my, that would be "heap much bee-keepers!"

* * *

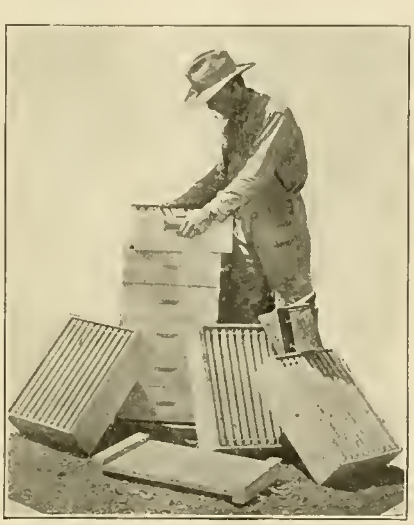
Bulk-Comb Honey Production—What Was in Those Stacks of Sweetness?

Last month some of the profitable colonies in our apiaries where bulk-comb honey is produced extensively, were shown the readers, and a promise was made that this month would reveal to them some views into the interior of some of those stacks, or at least show some of the things that were on the inside.

To get at this our assistant is seen, in the first picture, jerking off super after super of the most delicious fancy comb honey at the rate of 1000 pounds in less than half an hour. This is not exaggerated. We have done this time and again. The supers, as shown, leaning against the front of the hive are practically free from bees already, and when all that are completed are off the hive the cover is replaced and the supers are taken away and loaded on a wagon. In this work the supers are jerked up and about in such a way that the bees which have formed themselves in little clusters at different parts of the supers, in the meantime, will be shaken off in the hurried work, as we always hustle them off in the greatest kind of a hurry. Our idea is to get them out of the way, and on the wagon where they are then covered up with a large, heavy wagon-sheet, so the bees can not get to them, and thus prevent robbing to a great extent. Just how it looks on the wagon will be shown in another issue, since we have a special wagon for the purpose.



Scholl's Hobby—"Bulk-Comb Honey."



Scholl's Method of "Jerking" Off Bulk-Comb Honey Supers.

If you will examine the picture closely you will find that the supers are as free of bees as it is possible to get them. Our method of taking off honey in the most rapid way, is unique, and, as far as we know, entirely our own, since we had never before we adopted the method years ago, and even until now, read a description of such a method. It enables us to take off more honey in a given time than any other way we know of. Bee-escape methods are not excepted. Our assistant, in the picture, is jerking off four completed 30-pound net comb honey supers in the time one could place a bee-escape on. And when one considers that all of our yards are out-yards miles away, and that it would be ridiculous to make an extra trip to put on the escapes while we can take off the honey with the same trip and the same time it would take to put on the escapes, can you blame us for using this method, and claiming so much for it?

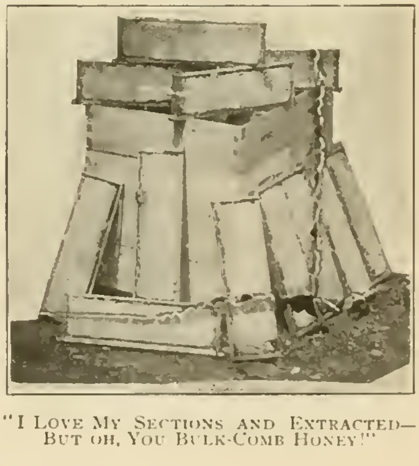
While others are brushing off bees, bruising and irritating them, and otherwise having a disagreeable task before them when using the deep combs, as the greatest majority of bee-keepers still do, we, with our shallow supers and frames are taking off super after super without having a brush in our possession at all. And it is all done so nicely and quickly that we would not change back to the old way.

Here is the way we approach the matter: With smoker well going in the right hand, and hive-tool in the other, the cover of the hive is pried up, a puff or two of smoke blown under it, when it is sent helter-skelter to the ground in front of the hive, so that the adhering bees can find their way back to the entrance in short order. While the left hand is thus engaged more smoke is blown over the top of the upper super, but, at the same time, the left hand goes to work on the next hive already, and its top comes off the same way as the first. So the work goes right on until we have 5 hives open at once. That is the number we can handle most satisfactorily. More would allow the bees too much time to come up again between the smoking of each hive, while if we took less colonies at a time, we would be required to wait for the bees to get out of way, causing a loss of time in that direction.

By this time the most of the bees in the first super smoked are moving down rapidly. We begin quickly and give each top super another rapid smoking, throw down the smoker and pry off the upper supers of the entire 5 hives in a jiffy, setting them against the hives, as shown, to allow the bees to run off more or less. Those that do not leave the supers are later jerked off in taking the supers to the wagon, as stated before. The first supers all off, a second round of smoke is given to the next supers, and these come off just like the first did. So it goes with all the next supers that are to come off.

It does not take so long to get the bees out of the supers succeeding the first ones, since, first, there are generally more bees clustered in the topmost supers, right under the covers; and, secondly, after the bees are started out of the first supers the bees in the ones below these are already alarmed and on their way down to the lower part of the hive before they are all out of the top supers.

Of course, this work can only be



"I Love My Sections and Extracted—But oh, You Bulk-Comb Honey!"

done with the Ideal shallow supers and shallow frames. And we think that there is no doubt about it that these will be considered the standard and proper size after a while, because they possess too many advantages to be ignored. The trouble at the present time is that the deep frames are claimed as the standard size, and there are so many of them in use that it is a hard matter to change things. But we, who have had extensive experience with both, have found the shallow ones so much better that we use them throughout, in our brood-chambers and our supers alike.

But before closing this article, it would be well to show the readers just what kind of things are in those supers that the fellow is jerking off the hive in the first picture. So we are giving you a glimpse of some of the combs, just as they come out of the supers. Unfortunately it is impossible to show in a picture the very beautiful comb honey that we do produce. It is not possible for us even to describe to the reader how beautiful the piles of honey look even to us, who have had tons and tons of this kind of combs year after year. But if you can imagine how your fancy section honey looks, you can get an idea of what we are trying to show in the pictures.

Next issue we will show some of the receptacles in which this honey is put for the market.

Texas and the Honey-Crop Reports

We have noted for some time that in all the honey-crop reports that are gotten together to find the conditions in the different parts of the country, Texas does not play any great part, it seems. At least one does not often see any mention of conditions about the honey crop from this State among the many reports that have appeared lately. It either shows one thing or another; first, that they do not need us, or do not consider us away down here in the South as of any importance; or, on the other hand, that we are a kingdom of our own down here in this glorious Lone Star State of ours, and through the high feeling of respect toward such a grand kingdom, with its many ways of its own, it is not put down with the names of the others on the lists that have appeared.

Now, we are not kicking, neither are we feeling "stuck up" about it, but we just would like to know where we do stand, anyway.

Bulk-Comb Honey at the National

That fellow Byer, in spite of his hint, page 252, better bring his lunch of Canadian "bear meat" and "whale oil" with him when he comes across the border. While he counts on the Texan bringing along his lunch of "bulk-comb honey," he need not rest assured that he might not need his own kind of lunch. While the Texan has thought about the Canuck's lunch, and the fact that each of the two could divide up their lunches, he is sure that he would not enjoy anything that is not as good as "bulk-comb honey." If the Canuck thinks his lunch better than mine, he would better bring his along.

Contributed Articles

Apiarian and Farm Help

Editor American Bee Journal:—I am in receipt of notice that my subscription for your good Journal has expired, and suggesting that I renew it. I am quite discouraged in the bee-business, not because we do not have forage for the bee, nor because your Journal fails to give the best current information concerning all subjects pertaining to this industry, but my men on the farm, through sheer neglect and laziness, let my bees all die during my absence last winter.

In this connection, it might not be out of the way to ask if it is not time that journals like yours were taking up this question of labor on the farm, and asking all politicians, especially those who are talking so much about the tariff (which they justify in order to maintain the dignity of American Labor), what about the American farm owner? The American farmers are not only the largest class of manual laborers in our country, but 40 years ago they were the highest type of manual laborers the sun ever shone on. Since then, the artificial handicaps put upon agriculture, especially those growing out of trades' unionism, tariff, and watered stocks, and the like, have brought about a deterioration in the personnel of the farmers of our entire country. These artificial handicaps are not only driving the intelligent country-born boys from the farm, but are keeping the intelligent and better class of foreigners from taking their places, so they are being replaced with a much lower type of foreigners. We are getting no emigration from those provinces of Germany that rear the best men, but the great bulk of the emigrants that come to the agricultural districts, are from the worst provinces of Austria, Poland, including the Russian Jew, and the Assyrians.

In spite of the extortionately high prices of food-stuffs in the market, the bulk of the farms throughout the corn-belt have been, in the last ten years, operated with no profit, except the advance in price of the land, which will vanish like dew before the sun, with the appearance of either short crops or low prices for farm products. The average farm throughout the corn-belt is not producing 40 percent of what it should, and would, produce if competent labor was obtainable.

A few days since, I needed an extra man in the hay-field. In going out to find one, I counted, within three blocks, 30 men "looking for work." Of that 30 only one was willing to go out to the farm. Of the other 29 only one was sufficiently interested even to inquire as to the wages I would pay. Yet, if you or I would go to Europe, and attempt to bring over some one who is capable and willing to go upon a farm, he is stopped at our port, and deported under a contract-labor law. All for the purpose of "preserving the dignity of American Labor," of which the 30 referred to on the streets of Omaha are samples.

It seems to me that every writer, not only interested in agriculture, but interested in the general good of this country, should insist that the American farmer be at liberty to find and hire his help wherever it can be obtained. It having been demonstrated that *the people of this country will not do the work on the farm*, the agriculturist should be allowed to get his labor wherever he may find it. We should be able to furnish more and better food at a lower price, in this country, than any other place on earth, and can, if the artificial handicaps be removed from agriculture. Yours very truly,

Omaha, Neb., July 16. William Stull.

[We referred the foregoing letter to Mr. C. P. Dadant, who replies to it as follows:—Editor.]

Mr. Editor:—The contribution which you submit to me for an appreciation and criticism contains some assertions that I could not possibly endorse. The gentleman is evidently viewing the farmers' "deterioration" from a local standpoint. But there are things in his argument worthy of consideration.

If we view this article as bee-keepers only, we must leave out the broad lines which it considers, for bee-culture is in a special condition brought about by its great strides of the past 60 years. If we view it as farmers or members of the great producing class, we must discuss political and social conditions, which will make our field a wide one.

The slogan of a relatively large portion of our population, for the past 20 years, has been "America for Americans." Very good. But who are Americans? We will certainly not confine this name to the aborigines or so-called Indians. Then whom will we include under this title? Will we take in those whose ancestors came over in the Mayflower? Why not add also those who have been at least for three successive generations on American soil? And why not those whose fathers were born in Europe, or those who, like myself, are natives of the Old World, but have settled, married and reared American-born children? With a little more liberality, we might accept those who 5 years ago applied for citizenship and have sworn allegiance. How about those who have just arrived and settled here, and those who contemplate coming?

In short, what would America be without the foreign element landed here at one time or another? How many of you are there, readers, who cannot trace their ancestry back to some part ot Europe?

When I was brought over as a child, from Europe, nearly half a century ago, no restrictions were put upon immigration. The foreign born population was 14 percent of the total. Nothing but good was secured from this immigration. I cannot understand why in 1863 we foreigners were welcomed as a benefit, and the door has since been closed on millions of others. That we should object to the influx of too many paupers is intelligible, but that we should make it difficult for respectable people to settle in our sparsely settled plains has always been beyond my comprehension. The country is certainly not overstocked with human beings, for if the entire population of the United States should be congregated in the single State of Texas, it would not be more thickly populated than the wealthy kingdom of Belgium!

We are told that the people who come here to work and send their earnings back to Europe or Asia are a detriment. I cannot see it. If I hire a man for $2 per day, I evidently have something for him to do which will net me a greater sum than the amount I pay him. If his work brings me $3, I have netted a profit of $1 for each day that I have employed him. It does not matter if he carries his money away, I am still the gainer; although I would, of course, prefer to have him spend it with me, and give me another item of profit on what he consumes. But I have already cleared a profit.

As a nation, we are very selfish. We have imposed ourselves upon the Chinese and the Japanese against their will, and yet we demand that they should keep off our shores. We are foreigners and yet pretend to keep the foreigners away. We do not look at the question of justice, but only at our own selfish interest, and then dare talk about our philanthropy!

The gentleman above mentioned claims that the personnel of the farms has deteriorated. This I cannot grant. The farmers are better off, have better homes, more education, read more (owing to the rural delivery), have better agricultural implements, and a better grade of live stock than ever. They dress better, have less hardships than formerly. Their sons go to the agricultural colleges in many instances, and come home with progressive ideas concerning manures, soil adaptation, injurious insects, selection of seeds, etc. In fact, they learn scientific farming. The farmer has less need of employees; that is, owing to greater perfection of implements, less are needed than formerly, and the hard tasks, such as harvesting, are done with less fatigue than before.

It is true, there is yet a great deal too much waste on the farm, but waste is an American habit, in city as well as in the country, and the education of the American concerning economy has yet to be made.

All that is said of the farmer may be said of the apiarist, only more so. The bee-keeper of 1860 was almost universally ignorant of the anatomy of the bee. There were only a few hundred practical bee-keepers in the United States. Even 40 years ago the proportion of those who had tried movable-frame hives was very small. The section-box did not exist. There was no such product as comb foundation, and the honey-extractor was known to only a few. Most of the honey sold then was "strained." Now, nearly every bee-keeper has learned the elementary principles of bee-culture; the moth has no terrors for him; and he is beginning to understand how to get rid of foul brood. It seems to me that a comparison of the bee-papers and the farm journals of the present with those of former times would give one a very good idea of whether there is progress or not. As to bee-papers, there were none in this country 50 years ago, except the American Bee Journal which was in its first year.

Why do our boys leave the farm? This was a proper question 10 years ago. It is not a proper one to-day. The boys are not leaving the farm, if they are treated right by the "old man" on the farm. Until lately, life on the farm had no attraction whatever, and if a boy wished to make his way, he had no alternative—he must leave the farm. There are many old farmers yet to-day who do not believe that the modern inventions and discoveries are meant for them. They cannot see anything in steam-heated homes, bathrooms, labor-saving kitchens, electricity, water on each floor, etc. Yet in many cases they could afford these things, and hold the boys to the freedom of farm life. Today, I see young men who have learned a good profession go back to the farm, for its health, its freedom, its chances of gain without being subject to the strenuous life of the crowded office-building.

There are many farms which do not pay, it is true, but those are either rented or run by procurators. The intelligent, practical farmer who lives upon his farm, raises profitable live stock, rotates his crops, secures a positive income, though less copious than that of the wholesale merchant or the banker.

I believe, Mr. Editor, that your correspondent is right as to the desirability of removing handicaps against securing as good help as possible for agriculture or any other industry. Many people believe in protection. Yet they would dislike to see protection between one State and another. They would object to a custom-house between Illinois and Iowa, or between those States and Missouri. But if the South had succeeded in seceding from the Union in the sixties, there would have been a custom-house established between those very States, since Missouri was one of the Confederacy. The old Mississippi, the beautiful river, almost the largest in the world, would have been cut in two and made into a pond without issue. And this would be called "Protection!"

Protect us against our own narrowness! Let us be free. And if the sons of Europe who have come here during the past 200 years have helped America to grow and become what she is to-day, let us not stop the incoming of more sons of Europe. We want them, their knowledge, their ideas, the choice of their methods. What has made America great is the mixture of ideas, of methods, of learning, brought by every tongue from northern or southern climes. In the most democratic manner, we have accepted the good, no matter whence it came. Let us continue to do so.

C. P. DADANT.

Hamilton, Ill.

[We hope, after reading Mr. Dadant's letter, Mr. Stull will take courage, renew his subscription to the American Bee Journal for some years in advance, take a new grip on things agricultural, and try to be as happy and prosperous as possible, no matter what the circumstances may be.—EDITOR.]

Pointers on Selling Honey

BY WESLEY FOSTER.

From the very first of my honey-selling experience, when I, a boy, would carry a half-dozen sections of honey in a home-made carrier from door to door, I have felt the importance of the introductory impression on the one I am trying to interest in my honey. If I cannot make a favorable impression right at the start, so as to command the undivided attention of the person before me, there is a small chance of getting that person interested in what I am trying to show him. This is why all instructions to salesmen given out by large firms emphasize the importance of neatness in dress and person. The importance of this is well known to salesmen, for rarely is one seen who is not above the average in personal appearance.

Then, the next important point to be remembered is always to greet the prospective customer in a gracious, cheerful way. This is just as important for all our dealings with people, but you might say that the bread of the salesman depends upon his being good-natured. And if we cannot succeed without being kind and gracious, most of us will make some effort to be this kind of a person. In fact, I have known a good many men who have improved their dispositions very much by acquiring the habit of smiling and looking pleasant while at the work of selling goods, and after the habit was formed, it permeated their whole life. One cannot get attention without creating a favorable impression, and a neat person and a sunny disposition go farther toward doing this than any other two things I know.

When entering a grocery with the intention of selling honey, if I have not learned the name of the proprietor or buyer, (which I always try to do,) I ask one of the clerks what the proprietor's name is, and whether he is busy. If he is busy I wait till he is at leisure, or leave, and come back a little later When later I get a chance to speak with him, I walk up to him and say: "I am Mr. Foster, are you Mr. Blank?' or, "I am glad to meet you, Mr. Blank I have a proposition that is to your great interest to see. The line is a ready seller, giving you a profit of 25 to 50 percent, and is one that reflects credit on the class of trade that comes to you. There is no chance of loss, for the goods are not perishable, and if they are not sold within a reasonable time we take them back and refund your money. May I not have a few minutes of your careful attention to look at what I have, and explain the proposition to you. My line is a choice grade of comb and bottled honey, put up with a binding guarantee of purity and highest quality. You see, the firm I work for have a reputation for honesty and integrity, and whatever dealings our house has will be satisfactory to you."

By telling Mr. Blank quite a little about my proposition, without letting him know what the line is, arouses his curiosity to see it, and when I ask him at the end of a little speech of this kind I rarely am refused a chance to explain my whole matter.

When he has consented to look my line over, I ask him where there is a place on the counter that I can display my samples. I generally look toward the back of the store or other place where he will not be disturbed, for it is necessary that my prospective customer should have a chance to think clearly, and thoroughly understand all the good points about my articles. He should, and if a good merchant, he will, be able to pick out from my samples certain sizes and grades that will sell well in his territory. This is a valuable point—getting the prospective customer to pick out the things he likes, and to assent to the desirable qualities as I pick them out.

I turn a bottle over in my hand, and hold it so the light falls on the bubble of air rising, balloon-shaped, through the honey, and say, "See that? Isn't that honey pretty? And see how thick the honey is!" I call attention to many of the desirable points, expecting the prospective buyer before me to assent to their correctness. He will, without doubt, notice some things of worth to the goods that I have forgotten.

When I have the careful attention of a man it is not a hard matter to sell him some honey, if he can't use it all. Men do not need to be convinced against their wills. If they are convinced against their wills the chances are that the order will be cancelled before the bill of goods is shipped. If the whole proposition is not clear and plain, it would better be gone over again, and everything made plain as daylight. Small, simple words are always best, for some of us are not overly bright, and I'll confess that I have turned salesmen down because they were using such big, technical words that I did not understand their proposition, and was too proud to admit it.

Enthusiasm, knowledge of the article, honesty and simplicity of statements, will make it possible for many of us to succeed in selling honey.

Boulder, Colo.

Under 10 Percent Swarms

BY D. M. MACDONALD.

"There's a tide in the affairs of men, which taken at the flood, leads on to Fortune." There is a tide in the affairs of bees which leads to swarming. Let the "flow" touch a certain point, and nothing can stem it. If we only could properly guage the psychological moment, we would be masters of the situation, and stop it every time. It appears to me that the critical period centers around the time when brood-congestion is nearly setting in; when temperature suddenly rises, and a flow sharply arrives. One of these factors may not create the bacillus of swarming—even two may not produce the fever, but a juxtaposition of all three leads to the inevitable preparations, which, once carried on a certain length, nothing but some providential interposition will check.

Timely attendance to ventilation, withdrawal of some brood, or the substitution of more room for breeding and storing, meet the situation. The idea of trekking is nipped in the bud, the bees adapt themselves to the altered circumstances, and, finding everything their hearts can desire, presciently bow to fate. The time when we can thus play Providence to our bees may consist of two or three days at the most—of one or two hours at the least. To diagnose when it may arrive, the bee-keeper must know exactly the condition of each hive internally, and, paradoxically as it may sound, this he can discover by without scarcely looking inside. OUTSIDE OBSERVATION is the key of the position.

Now I want to go back to the genesis of affairs. I do not wait until certain events develop. I *anticipate them.* Early in June I enlarge the entrance to its full capacity if deemed necessary; bottom ventilation may be supplied, but not often, as there is a deep space below the frames; and if the weather is extra warm, blocks raise the front of the hive, and in extreme cases the whole hive. Each colony is treated according to requirements, independent of what is done to its neighbors. A case of sections is supplied early, and a second placed above as a "cooler," before it is required as a store-room. But I am anticipating.

Hives in the front rank are treated by mid-June to a mild deprivation of brood, or, as an alternative, are given a second body of from 8 to 10 frames. It would be too heavy a task on the bees to give 10 standard frames at one time, so, as a rule, only 8 are given above, and the lower body reduced to a like number, by having two of its frames, chosen because they are solid slabs of brood, raised as part of the complement in the top story. The remaining two, up and down, may, or may not, be given later, according to circumstances.

Sometimes operations are varied by placing the empty body below, but this necessitates the use of excluder-zinc, which I do not like, to confine the queen above during the critical period. Only a small percentage of the colonies receive this special treatment, the remainder being left right through the season with only 10 frames. A glance in at the side, occasionally, without using any smoke, reveals if the queen visits the outside frame, and if she does, one or more frames of brood are withdrawn and used to work up second-class colonies to the first-class, empties being substituted in the brood area.

The entire management up to this period consists in seeing that the air in the hive interior is pure; that the temperature does not run too high; that the queen has ample room for ovipositing; and the bees full scope for storing and rearing their brood. Generally, they are allowed some comb-building — an important desideratum, which, given, hinders a spirit of unrest from being generated. That is why we in this country seek to renew our internal works gradually.

At the period of spring cleaning two or three of the oldest combs, or those showing any defect, are withdrawn from the hive, and later their place is taken up with frames fitted with full sheets of foundation. Supplying these frequently tides us over the critical period. Early spreading of the brood should be condemned, but when the swarming season approaches, we "jump the frames," confident the process will work for good, and not evil. In thus doing we give some employment to the bees, and add to the queen's comfort by placing cells immediately at her disposal where she likes to have them. This secures a *progressive,* forward movement, and checks any thoughts of queen-cell formation. This renewing of the combs, and eliminating all with many drone-cells, is one of the very best means for checking swarming. There is an undoubted correlation between the laying of drone-eggs and their development into mature males, and the construction of queen-cells. Without the appearance of drones in a hive, or at least their progress towards puberty being manifest, worker-bees never dream of preparing for swarming. Suppress drones in every hive most rigidly, if you have any hope or expectation of checking the generating influence. This is one of the main reasons for the excessive swarming of old, and the undue proportion in many apiaries at the present time, when other bee-keepers have little of it. For the drone in his proper place I have a high respect, but I would without a pang of remorse, treat him *a la* Jones, when I find him in the larval stage, where I don't want him. Here, indeed, is one of the chief factors tending towards the swarming craze. Suppress the cause, and you go a long way to working out a case. The sooner this is recognized as a fact the better for the industry.

From the time the first case of sections is given to a colony the front entrance is watched; a momentary glance occasionally will do, and as soon as outside observation leads me to think there is a certain progress made, I slip on a second case *above* the first. It is not anticipated that the bees will occupy it. It is not inserted as a receptacle for honey-storing, but is simply a "cooler" case, placed there as a check on congestion in any shape, but it acts as a swarm-preventer, far better, indeed, than any non-swarming chamber placed below the body. An additional one is added any time it is found that No. 2 is being worked in, and so on. Ventilation is given in upper chambers, but only in extreme cases, when weather is excessively hot. Rather conserve heat here than dissipate it, as a rule.

Recognizing that old or worn-out queens are a fertile source of creating the swarming fever, these are deposed before they begin to fail. The rearing of a virgin in the supers, and allowing her to depose the old queen, works favorably, but it is best to do the introduction and execution at first hand. The only check I would seek to impose on a queen's movements would be to place her temporarily in the upper or lower tier of frames, in order that I would secure most brood where I desire it. And, then, I think here is a valuable pointer, if she is in the upper set of frames for 10 days or a fortnight, this can then be placed below, and the other raised above; but with one frame from this lower body placed in the now upper set of frames, and on that one frame *the queen.* For another 10 days there is little likelihood of swarming, and that brief space may tide us over the critical period.

I have tried caging the queen, temporarily, drawing her, or even deposing her, and allowing the bees to rear another mother, but I don't like anyone of these practises. They fail to kill out the swarming instinct, and they cost the colony a lot of valuable brood. I have no love for cutting out queen-cells to suppress incipient thoughts of swarming. It is a messy job, and fails frequently.

I have experimented with swarm catchers, non-swarming chambers below frames. I have "shook" swarmed, and tried numberless plans and systems advocated in the past, but have discarded all of them in favor of some of the old and simpler modes of procedure. Where many have erred in the past is that they recognized too few *prime factors* in this trying problem. Their devices were originated to check or diminish one single cause, whereas several go to form the sum total of the whole. It boots not that one or two should be reckoned with, if all the others are forgotten, or treated as if they were non-existent.

All the chief factors have to be taken into full consideration if success is to crown our efforts. Even then we will fail at times, and must reckon that from 5 to 10 percent of our colonies will swarm in spite of all known preventives. This is near enough perfection for me. For about 10 years now I have kept my ratio of swarms to colonies well within the larger figure. To accomplish this, I simply attend to ventilation above and below; keep young queens; endeavor always to make room for the queen's ovipositing; never allow the brood-nest to become congested, either by honey or brood; supply ample storing chambers ahead of actual requirements; rigidly restrict drone-production; place no checks on the workers' movements; diagnose each colony on its own merits; know what is going on inside each hive; and never stimulate in spring to force the pace. Then, by gradual *expansion* and *contraction,* I, so to speak, keep the rein on my bees.

Banff, Scotland.

Influence of Heat on Swarming

BY O. B. METCALFE.

I wish that Mr. D. M. Macdonald, whose articles on swarming begin on page 221, could be induced to tell us how he knows that heat is beyond a doubt a prime factor in causing bees to swarm. I hope he will give his evidence.

I do not believe that a colony of bees ever swarmed because it was too hot, either here or in Scotland. *Not one!* I know that that is a pretty strong statement, but I feel pretty strong on the subject.

I would suggest that if any bee-keeper has a swarm that he knows came out because of heat, that he pinch off the queen's head and send to O. B. Metcalfe for a queen that will not swarm however hot it gets. I feel pretty sure that enough hot weather will stop swarming to some extent, but I have seen combs melt down from the heat and drive the bees out on the outside of the hive under almost every condition of honey-flow, but I never saw a swarm as a result of it. They hang around until the honey from the melted combs runs out, and then meekly crawl back to begin all over.

If I may be allowed to get a little bit flowery myself, I should say that my bees are such a brave strain that their last cry is, "Don't give up the ship!" I have never seen a colony of bees acquire the swarming impulse in a hive where the queen felt that she had plenty of room to lay; and the bees felt that they had plenty of room to store honey, no matter how hot, cold, or how foul the place they lived in.

We keep the same entrance through the summer as in the spring. In the spring the wind blows from 40 to 60 miles an hour, thus greatly helping ventilation. At this time the weather is quite cold, but the bees swarm with a vengeance, unless given plenty of room. In the summer the wind blows very little, and the weather is very hot, but the bees will stand a great deal more crowding without preparing to swarm under similar conditions of honey-flow. What about it?

Actual experiments last year convinced me that enough ventilation will retard or even prevent swarming; but my argument is, that it does so because it does not favor the best and most rapid brood-rearing, therefore it may be overdone.

Give your colonies ventilation enough to evaporate their honey to ripeness, and if you are trying to force them into comb-honey supers take brood enough away from them to prevent swarming, rather than give them ventilation enough to hinder the best brood production. Brood is what you want. You can use it to good advantage in weak colonies, or for making increase.

Some experiments I am now conducting in feeding to produce wax, have shown me the value of a large force of young bees in the hive.

If any one comes up to you and tells you to uncap brood to prevent swarming, hit him—unless he is much larger than you.

Mesilla Park, N. Mex.

Uniting Colonies of Bees

BY G. M. DOOLITTLE.

"Say, Mr. Doolittle, won't you tell us something in the American Bee Journal about uniting bees? I tried to do this last fall, then again this spring, and I made nearly a failure of the matter."

Thus writes a correspondent. I do not favor the plan of uniting bees in the spring very much. Not because it can not be done at that time as well as at any other, but because the gain is not as apparent then as it is in either early summer or in the fall. However, if any one wishes to diminish his number of colonies in the spring on account of one's capital, stock of hives, etc., being limited, it is sometimes well to do this, though I doubt the profitableness of so doing. Where uniting on this account is to be done, I consider it better to unite only medium colonies, allowing the weaker and the stronger to remain as they are. If two of the strongest are united, no gain is made; for, as a rule, such strong colonies come up to the maxium number of bees a little too soon, thus contracting swarming fever before the honey harvest fully arrives, while at the same time many of the bees which should go through the harvest as honey-gatherers die during the first part, or in the height of the bloom.

Then where we unite very weak colonies early in the season, there seems to come on such united colonies an undue agitation, lots of brood being started from this result, which, from the feeding and necessary care, wears out the vitality, the same being not over-abundant in such weak colonies, and the united bees die of old age or worn out vitality before enough of the brood emerges to perpetuate the colony, which generally results in the loss of the whole, or of the colony pulling through little if any better than would have been each had they been tucked up as comfortable as possible and left to themselves. I have put as high as 7 such weaklings together the first of May, only to have the whole die, or to have what remained of them four weeks later, not as good as were each of the 7 other similar colonies which were left to themselves.

The inmates of these weak colonies are generally weak from poor wintering, and when they are stirred up to unusual activity through uniting, they soon "play out" and die, as nearly all know, who have tried to save their weak colonies by uniting them in early spring.

Shut these very weak colonies on only as many combs as they can fully occupy, which will generally be not more than 2 or 3, one of which should be quite well filled with honey, keeping them thus by means of a dummy or division-board. By having the entrance on the opposite side of the hive from where the combs are, we keep away the cold air and prevent the little colonies from being robbed out. As they build up add, as they require, other combs till each hive has half the number of combs a hive will contain when full. Keep them thus until the bees begin to crowd out in the vacant side of the hive, or beyond the dummy, when you are ready for uniting.

Now for the uniting: During the day set a hive where you wish the united colony to stand, or if the stronger one of the two is where the united colony can remain, leave the hive there; then in the evening set this stronger colony off its stand, and set the hive the united colony is to occupy, in its place. Now bring the other hive and its contents to the same place, when you will open both hives, after having smoked them quite thoroughly, and take first a frame from one, bees and all, and then a frame from the other, setting them in the new hive alternately till all are in. Now close the hive and shake the few bees which may still remain clinging to the empty hives down in front of the united colony into which they will run with fanning wings.

Where this uniting is done in the evening twilight very few bees will take wing, and thus all, or nearly so, will be in the united colony where we wish them. If you wish to save one of the queens, it is best to hunt her up during the day, and use her as you see fit; otherwise one of them will disappear before the next morning.

This mixing up seems to be the very best way to make the astonished and mystified little things of the feminine gender form the acquaintance of their new home and each other, so that when they come out of the hive the next time at their leisure, most of them will mark their location anew, and thus not get lost by returning to their old location. But it is always well to remove everything looking "home-like" from the old stand, so that if, in any case, the older bees should go back they will have sufficiently marked their new location, so they will return to it after hovering about the old place for a few minutes.

In all of my 40 years' manipulation of bees, I have never known bees to fight and kill each other where colonies were united by alternating the frames of bees as above, where smoke was used sufficiently to cause the most of the bees to fill themselves with honey before the uniting was commenced. And this filling with honey has very much to do with their adhering to their new location.

When uniting in the fall we have a little different state of affairs, for now, as a general rule, each hive is full of combs, which, also, as a rule, are not very fully supplied with honey. Supposing that we have 2 weakish colonies with honey enough in the 2 to make plenty of food for one colony. During the day we go to each of these hives and carefully look over the frames. Those having the least honey in them are taken from the bees until only half of the combs remain in each hive. From those taken, the bees are shaken and brushed till they are freed from the bees, doing this in front of the hive the combs were taken from, so that each colony keeps its own bees until the uniting is done. These now beeless combs are stored away for future use. If there is any choice regarding the queens of these 2 colonies, the inferior one should be killed at this time, otherwise she may kill the good one we wish to preserve. There is something in this worth looking after, as this fall uniting helps very much by way of weeding out inferior queens, and autumn is the best time to do this culling, as a rule.

When twilight comes, these colonies thus prepared are to be united by alternating frames, the same as we did in summer, smoking the bees enough to cause them to fill with honey before opening either hive, when, after uniting, you will have a good colony made from the 2 weak ones, with plenty of stores to winter on. If from any reason you wish to rid of bees the combs having little honey in them, on some day when it is too cool for the bees to fly freely, or when cold enough so those that fly can easily enter their hives, it can be done so as to save the most of the bees, by placing 2 empty hives top of the one the bees are to go in, when, by lowering the frames down in these hives, the bees can be shaken off with scarcely one taking wing, as they are confined by the walls of the hive.

Borodino, N. Y.

Poor Wintering—Basswood—Feeding Bees

BY F. L. DAY.

In the fall of 1908 I put 81 colonies into the cellar. They had their hives well filled with fall honey of seemingly good quality. Only a few had been fed a few pounds of sugar syrup each. With the exception of some colonies having a little foul brood, they appeared to be in fine condition. As I had never had a serious loss during the winter, I felt quite confident of good results. Owing to having more bees than usual, the cellar was given more ventilation than formerly. All seemed well until April. Owing to the backward spring the bees were not taken out until April 26, 1909. The cellar was thoroughly ventilated in advance, but the bees flew out with a rush at the first opportunity. For the first time in 7 years they drifted. Four hives at the south side of the yard got too many bees. One hive had so many they could not all get inside.

The bees were taken from the cellar in the forenoon, as usual. An examination showed some 10 colonies dead from dysentery. I did not get time to examine all of them that day, and did not realize how badly off they were. We had 4 days of snow and rain just after this, so I did not overhaul them all for a week or more. After the first flight many of the weak colonies clustered on the middle combs, which were empty. The cold spell caught them there, and they starved with from 10 to 20 pounds of honey in the side combs. A careful examination showed the honey in nearly all the hives to be more or less sour, and the great majority of colonies had dysentery to some extent. They dwindled until I had lost 47 of the original 81.

Only once before had the bees had to depend upon fall honey for winter stores, and they had come through in fine condition that time. But they were confined only about 140 days then, whereas they had no flight for 175 days the winter of 1908-9. I wish some one would tell me what made that honey sour, and how to foretell such a disaster another time. It is unpleasant to lose 60 percent of one's bees that way.

BASSWOOD A FAILURE.

I bought a few colonies of bees and bent all my energies to getting as many colonies as possible ready for basswood, which does not blossom here until July 15th to 20th. I secured 500 pounds of clover honey, but the basswoods, although blossoming profusely, failed to yield any surplus for the second time in 3 years. My average per colony was thus only 12 pounds, or practically nothing. My increase, made artificially, did not do as well as usual. There was no fall flow, and I had to feed my 50 colonies 800 pounds of sugar.

FEEDING SUGAR SYRUP.

In my first years of bee-keeping I fed syrup made of equal parts sugar and water, simply because I understood that it was necessary to do so in order to avoid granulation; that in case it was made thicker it would then require some acid mixed with it to prevent granulation. As I had almost perfect success in wintering my bees on this thin syrup, I continued to feed in this manner until the fall of 1907. That season I fed 900 pounds of sugar to 61 colonies. The bees had stopped brood-rearing a month earlier than usual that fall, and the clusters were smaller than common. The thin syrup was taken from the feeders so slowly that much of it soured, thus becoming unfit for winter stores. A few colonies were lost from this cause during the following winter. While some came through as well as ever, yet the general average was poor.

I was tired lugging around so much water while making and feeding the thin syrup, and concluded it would be better for me, as well as for the bees, to make the syrup about 2 to 1, as is now generally advised in the bee-papers. The 800 pounds of sugar used in 1909 was fed in this way. At the last examination it showed no signs of granulating in the combs.

I have always produced extracted honey exclusively, and sold it all in my home county. In the past year of failure I found it advisable to buy honey abroad, and supply my customers as usual. By pushing my sales more than ever before, I have managed to make the balance come on the right side of the ledger.

I am hoping for better things the coming season.

Detroit, Minn.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
DR. C. C. MILLER, MARENGO, ILL.
He does NOT answer bee-keeping questions by mail.

Rearing Queens

I am trying to rear a few queens now; the cells are very small but have plenty of space. Does the size of the cell have any effect on the queen reared in it, as to quality and prolificness? Will they be good queens?

ARKANSAS.

ANSWER.—Generally speaking, a queen reared in a large cell is to be preferred; yet sometimes a good queen is reared in a small cell and a poor queen in a large cell.

Colors of Honey

I would like to know the cause of dark honey. ILLINOIS.

ANSWER.—The color of honey depends upon the source from which the bees obtain the nectar. From buckwheat they get honey that is very dark, from fireweed that which is very light, and varying shades from other plants. Sometimes there is a difference in the shade of the same kind of honey obtained in different regions or on different soils. Some alfalfa honey is a shade darker than the lightest to be found elsewhere.

Bees and Milkweed Pollen

What is the matter with my bees? I have 11 colonies, and they are in a bustle all the time, carrying off bees that are deformed, their feet being very forked so they can't do anything at all. INDIANA.

ANSWER.—Your bees have been working on milkweed, and the pollen-masses are sticking to their feet. If you watch, you will see bees sticking to the blossoms of the milkweed and having difficulty to break loose. A few bees are lost by it, but perhaps the bees get enough nectar from the blossoms of the milkweed to pay for the loss.

Rendering Comb into Beeswax

I bought a lot of hives full of empty comb which I want to render into beeswax. I don't know how much water to use when melting the combs. Kindly give me directions for doing this kind of work. OHIO.

ANSWER.—The amount of water used will depend upon the plan you use, as described in your bee-book; only you will not be likely to make any mistake in using too much water, but there may be danger of using too little.

Queen's Eggs Fail to Produce Queens

I received a queen-bee ordered in May, 1910. She seems to be all right except that I can't rear any queens from her I have taken frames from her and given them to 3 colonies. They all started 3 or 4 queen-cells, and the cells were all gone two or more weeks ago, but all 3 are still queenless. All the brood seems to hatch all right; no drones to speak of. What is the matter?

ILLINOIS.

ANSWER.—There is no trouble with the queen or the brood; the trouble seems to come afterward. It may be that the young queens have been lost on their wedding-flight, the severe drouth (if you have a severe drouth as in other parts of the State) making the loss of young queens a common thing. If you have continued to have young queens reared, the probability is that the fall flow likely to be on now will make you more successful.

Method of Increase

I have been reading your "Forty Years Among the Bees." I would like to know your opinion on this method of increasing when there is practically no swarming. As the colonies supersede their queens divide each colony into 2 or 3, giving each division 2 sealed cells, 1 frame of eggs and larvæ, and 1 or 2 of honey. CUBA.

ANSWER.—A good plan. Sometimes very few cells are found at superseding, but one cell will be enough for each division. If you divide into 3 parts, the hive that is on the old stand will need only one frame of brood (as it will have all the field-bees), and the remaining brood can be divided between the other two. It will be well to fasten the bees for a couple of days in the hives that are not on the old stand, managing to have a small entrance stuffed with green grass or leaves, and then if you forget to open it the bees will open it themselves.

Colony With Many Drones

I have a colony of Italian bees that are rearing young bees quite fast, and the body of the hive is full of honey. What puzzles me is the fact that they have so many drones and no apparent use for them whatever. Our bees are just barely making a living, there is no possible chance for any swarming, and they have a good young queen of this spring's rearing. Why do they keep the drones? The bees did quite well here through part of June and half of July. It is too dry. However, we are hoping for some fall honey. The "Old Reliable" is still eagerly read.

IOWA.

ANSWER.—Likely the trouble is from too large an amount of drone-comb in the hive. It may pay you to cut out the drone-comb and put patches of worker-comb in its place. Or, you may put in a patch of worker foundation where you cut out the drone comb. Cut away the cells around the hole on one side, leaving the septum exposed, and press the patch of foundation down upon this septum. Next spring will be a good time to do this, when the combs are partly empty.

Time of Day Bees Swarm—Knowing Foul Brood—Getting Nuclei—Best Bees

1. What time of the day do bees swarm?
2. How can you tell if the colony has European and American foul brood?
3. When is the best time to get nuclei?
4. Which is the best, Carniolan, Banat or Caucasian bees?

OHIO.

ANSWERS.—1. The prime swarm, which issues with the old queen, generally comes off somewhere between 9 and 12 o'clock. An afterswarm, having a virgin queen, is more irregular, and may issue earlier or later, in some cases as early as 6 in the morning, and as late as 4 or 5 p.m.

2. Any time when there is brood in the hive. You may tell by the scales in the cells when no brood is in the hive, but it is much more difficult.

3. It doesn't matter very much when. If you had ordered nuclei earlier you would have been farther on than to order them now. But if you order them now you will be farther ahead than if you wait till next year. Generally, too, you can get them a little more promptly at this time of year, and if there is any difference in cost it is in favor of ordering now.

4. I don't know. Each has its champions, claiming that their favorite is best.

Treatment for European Foul Brood

I write to let you know the condition of my small apiary to date. The latter part of May European foul brood showed up in 7 hives out of 20; the forepart of June I gave them my treatment, which is to shake bees and queen onto a set of drawn brood-combs, placing the diseased brood above an excluder. I am delighted to say the disease has disappeared, and I have extracted from 40 to 104 pounds of white clover honey from each colony, some occupying 40 Hoffman frames at a time; also, I have not had one swarm. My bees are all Caucasian. This has been a grand year so far, and I expect to get 100 pounds per colony from buckwheat, as it has just commenced to yield, and there are thousands of bees in each hive.

NEW YORK.

ANSWER.—If it turns out that this treatment proves effective, it will be a great gain, as it will prove no interference with a crop of extracted honey. No doubt colonies should be made very strong before the treatment.

Treatment for American Foul Brood

Would you treat a colony for American foul brood if just a few cells were affected on each comb? The bees have gathered about 50 pounds of section honey. All the bees are quite strong, and I don't like to destroy all the young larvæ and eggs just on account of a few cells. What would be the best way to do, wait until next spring and see if it developed into a bad case and then treat it?

UTAH.

ANSWER.—It seems somewhat hard to treat a colony for only a few cells, but the likelihood is that those few cells will keep constantly increasing. Likely the colony would continue with little diminution until next year, but in the long run would you gain by postponing treatment? The treatment next spring or early summer would interfere with the honey crop more than to treat them now. But you need not "destroy all of the young larvæ and eggs," although the loss of eggs and very young larvæ is not so serious a loss as the loss of older brood. A modification of the Baldridge treatment may serve you:

Find and cage the queen. Put in an empty hive one or more frames of brood that you know are clean, from healthy colonies. Put your caged queen in this hive, or at the entrance, and set the hive on the old stand, moving the old hive to one side a few feet If this is done at a time of day when bees are at work, the bees returning from the field will enter the new hive on the old stand, moving the old hive to one side a few feet. If this is done at a time of day when bees are at work, the bees returning from the field will enter the new hive on the old stand, and as soon as a goodly number have returned the queen may be liberated. The old hive may then be placed close to the side or on top of the new one, and a wire-cloth tube arranged to go from the old hive to near the entrance of the new one. Then at the end of 21 days all the brood will be hatched out, and you can carefully brush the bees off the combs and melt the combs, thus saving all brood and bees It will be well to furnish water to the bees in the old hive, as no field-bees return to it.

Storing from Watermelons and Cidermills

1. Watermelon shipping season is over here. We have left lots of sunburnt melons. I cut lots of them for the chickens to get the seeds. The bees fairly covered them. Do they gather honey from them?

2. If I hauled them up within a quarter of a mile of the hives and cut or burst a wagon-load a day, would the bees gather "honey" to amount to anything? There are any amount of them here.

3. I understand if bees gather honey from apple pomace from a cidermill, it will be bad for them to winter on Is that correct?

4. Would honey from watermelons have the same effect?

5. Honey that is soured just a little--does it hurt to feed it back to bees?

6. I put 100 pounds of honey in glass jars, and 2 jars soured. What was probably the cause?

TEXAS.

ANSWERS.—1. The juice of the melons is sweet, and the bees seem to use it as nectar.

2. I don't know how much it would amount to, and I don't know what would be the quality of the product.

3. Yes.

4. I don't know. The apple pomace is fermented. If the melons are not fermented, they would probably not be so bad as the apples.

5. It will be all right to feed it in spring for brood-rearing after bees are flying daily, but would be bad for wintering.

6. Too thin. A lot of harm is done in more than one way by extracting honey before the bees have ripened it.

Queen-Mating—Queen-Cell Protectors

1. I understand that a queen-bee can, and does at times, lay eggs before she has mated that will hatch drones. Will the eggs from an Italian queen-bee that has mismated hatch pure Italian drones, or will they be half-blood the same as the workers?

2. How are those little cone-shaped wire queen-cell protectors used? I have a number of them, but did not use them because I could not make them cover the cell as I thought they ought to do.

MINNESOTA.

ANSWERS.—1. The drones are reared from eggs that are not fertilized, and are of the same blood as the mother. Some claim that the mating has some influence on the drone-eggs, but that influence can certainly be but very little.

2. The protector must be large enough to cover the whole of the cell after all superfluous wax has been trimmed away from the cell. The point of the cell is put in the hole of the protector, and then the 4 corners of the protector are pulled up about the cell and the 4 points of the wire-cloth twisted together. A slender wire has one end fastened to the protector and the other end of the wire is fastened to the middle of a nail. Two frames are pulled apart, the cell is let down between them, so that the cell will be at the middle of the frames, and the nail across the top-bars prevents the cell from falling down. Generally, however, there is no need of the nail, for the frames come near enough together to hold the cell; the wire serving to hold the cell in place till the frames are shoved together.

A Beginner's Questions

1. How long ought a colony to be on old comb?

2. What is the best way to keep moths from the bees? I see where you say you do not pay much attention to them. They are the worst drawback I have. Roaches are next.

3. I have a colony I transferred to a frame hive in June, and I thought they were doing all right. I was surprised, 3 weeks ago, to see the swarm out. On examination I found moths had completely ruined everything they had. I put them in a new hive with Hoffman frames filled with sheets of foundation, and am feeding them sugar syrup. They have drawn about 2 sheets, have sealed brood, and the queen is laying. Is it too late to try to carry them through the winter?

4. How do you introduce drones into another hive? This colony has none. Will it be necessary for them to have any?

5. What would you call my bees? Some are black, some have 1, 2, 3, and 4 bands. The queen in this colony is a golden color all over. I see some drones of the other colonies that way.

6. Is it a fact that queens mate but once during the season?

7. My bees all came from one colony, but if I do as you say, "Take some from one hive and put them with another," they invariably kill them out. Now why is this? I have several weak colonies that I would double up, but I dare not on this account.

8. They are in box-hives. Do you think this has anything to do with it?

MISSISSIPPI.

ANSWERS.—1. I don't know. I have never used combs more than 40 years old or so, and have never rejected a comb merely because it was old.

2. Keep all colonies strong and have Italian blood, and you ought to have no trouble with moths. When I kept blacks there was trouble, but with Italians or vigorous hybrids the bees take care of themselves.

3. If you have kept up the feeding when the bees were not gathering, so that they will have enough stores for winter, there ought to be a fair chance for their wintering.

4. What do you want to introduce drones for? Drones are only needed to mate with the young queens, and one colony that has drones will do for the whole yard, for the queens mate with the drones outside the hive, perhaps half a mile away.

5. They are called hybrids, being a cross between blacks and Italians. Your yellow queen mated with a drone of darker blood.

6. Not only that, but she mates only once for life, although there may be occasional exceptions.

7. Yes, being in box-hives has much to do with it. You can not lift a comb out of a box-hive, but you can lift it, bees and all, out of a movable-frame hive, and if you quietly set it in another hive close up to the brood-nest, at a time when bees are at work, there will be no trouble. Neither will there generally be any trouble after the working season is over.

Colors of Bees.

What is the name of the yellowest race of bees known? What color are the Cyprian bees? Are there any worker-bees yellow all over? If so, where do they come from?

SUBSCRIBER.

ANSWER.—Until of late years there have been no yellower bees than the Italians, although the Cyprians look very much like them. But there has been developed in this country what are called Goldens, and these are practically yellow all over.

Uniting Two Colonies of Bees.

1. I wish to unite 2 colonies in one, so I will have the empty hive for next season. Please give your method. I have placed the one hive over the other, but the bees are in both stories when it is time to carry them into the cellar. Could you suggest a way so I could have all the bees in one hive when it is time to place them in the cellar, as the 2 colonies united in one hive is very bulky and heavy to carry?

ILLINOIS.

ANSWER.—As you are successful in uniting by placing one colony over the other, it is hardly worth while to suggest any other way, but merely to say how to reduce to one story. You will proceed to do this any time after the bees have peaceably united together, and that may be within a day or two, or you may wait later, only it should be done early enough so the bees will have plenty of time to arrange their winter lodging to their satisfaction. On the whole you will find it more satisfactory to do the work while bees are still doing some gathering. Lift off the upper story, setting it close by. Lift the frames out of the lower story, one after another, to inspect them, putting back into the hive such as contain brood, and putting the others into an empty hive that you have at hand for convenience.

Now take out of the upper story the frames that contain brood, putting them in the hive on the stand. Then select from all the frames left the ones best filled with honey, until you have the hive on the stand filled up. From the frames that are left brush into the hive all the bees so as to make sure the queen is in the right place, unless it be that in putting frames into the hive you may have seen the queen and know she is in the hive on the stand. If it be pretty late in the season, you can store away the one story of combs taken away, but if it is yet somewhat early it will be a good plan to put it back on, with a queen-excluder between the two stories. Then later on you can take away this upper story, brushing all bees back into the hive, or on the ground in front of it.

Selling Honey on Commission.

What can I expect from commission men selling my honey in sections 4¼x4¼x1⅞, weighing about 10 ounces per section, all alike in each shipping-case of 24, and weighing alike? There will be grades of white and amber weighing 11 ounces per section, 12, 13, 14, 15, and 16 ounces. There will be in each shipping-case 24 sections, each weighing alike, shipping-cases and crates furnished, freight 40 cents per 100 pounds to New York City. How would you grade this, and what percentage are broken in shipment to commission men, or what will it cost per section for each grade fancy A-1, No. 1, No. 2, and No. 3? In grading, do you have sections of all weights in each shipping-case? NEW YORK.

ANSWER.—I really don't know what you ought to expect from commission men for sections sorted as you have sorted yours. Such sorting is entirely new to me, and I doubt if you will follow it up very long. It involves the weighing of every single section separately, the sections then to be distributed into 7 different lots of the white honey, and as many more of the amber. The commission man would probably be somewhat undecided as to just how he should sell it. If he is in a market where honey is sold by the pound instead of being sold by the section, likely he would sell at the same price per pound all of the kinds from those that weigh 16 ounces to the section down to those that weigh 12 ounces each. The sections that weigh 10 or 11 ounces each should not be sent at all, for they will be only partly filled and sealed.

As to properly grading, the folowing rules will help you:

EASTERN GRADING RULES FOR COMB HONEY.

FANCY.—All sections well filled, combs straight, firmly attached to all four sides, the combs unsoiled by travel-stain or otherwise, all the cells sealed except an occasional one, the outside surface of the wood well scraped of propolis.

A No. 1.—All sections well filled except the row of cells next to the wood; combs straight; one-eighth part of comb surface soiled, or the entire surface slightly soiled; the outside surface of the wood well scraped of propolis.

No. 1.—All sections well filled except the row of cells next to the wood; combs comparatively even; one-eighth part of comb surface soiled, or the entire surface slightly soiled.

No. 2.—Three-fourths of the total surface must be filled and sealed.

No. 3.—Must weight at least half as much as a full-weight section.

In addition to this the honey is to be classified according to color, using the terms white, amber, and dark; that is, there will be "Fancy White," "No. 1 Dark," etc.

NEW COMB-HONEY GRADING RULES ADOPTED BY THE COLORADO STATE BEE-KEEPERS' ASSOCIATION.

No. 1 WHITE.—Sections to be well filled and evenly capped except the outside row, next to the wood; honey white or slightly amber, comb and cappings white, and not projecting beyond the wood; wood to be well cleaned; cases of separatored honey to average 21 pounds net per case of 24 sections, no section in this grade to weigh less than 13½ ounces.

Cases of half-separatored honey to average not less than 22 pounds net per case of 24 sections.

Cases of unseparatored honey to average not less than 23 pounds net per case of 24 sections.

No. 1 LIGHT AMBER.—Sections to be well filled and evenly capped, except the outside row, next to the wood; honey white or light amber; comb and cappings from white to off color, but not dark; comb not projecting beyond the wood; wood to be well cleaned.

Cases of separatored honey to average 21 pounds net per case of 24 sections; no section in this grade to weigh less than 13½ ounces.

Cases of half-separatored honey to average not less than 22 pounds net per case of 24 sections.

Cases of unseparatored honey to average not less than 23 pounds net per case of 24 sections.

No. 2—This includes all white honey, and amber honey not included in the above grades; sections to be fairly well filled and capped, no more than 25 uncapped cells, exclusive of outside row, permitted in this grade, wood to be well cleaned, no section in this grade to weigh less than 12 ounces.

Cases of separatored honey to average not less than 19 pounds net.

Cases of half-separatored honey to average not less than 20 pounds net per case of 24 sections.

Cases of unseparatored honey to average not less than 21 pounds net per case of 24 sections.

The Colorado rules contemplate selling by the case, not by the exact weight, and so there is a definite limit as to the weight of sections going into each case, but not so as to require the weighing of each separate section. For instance, in No. 1 white, you must see that no section goes into the case that weight less than 13½ ounces, and that cases of separatored honey holding 24 sections each shall average not less than 21 pounds net.

The Eastern rules contemplate selling by weight, and so no definite weight is mentioned. Of course, you will see that by either grading there will be in the same case sections of different weights.

If the sections are properly filled and properly packed for shipping, there should be no breakage whatever. If they weigh only 10 ounces each, and have no bottom starters, they should all be broken in shipping.

You can figure out for yourself what the honey would net you, depending on the price at which the commission man sells. Ten per cent of the total amount he receives for the honey must be deducted for commission (unless a smaller per cent on a large amount), and freight and cartage must also be deducted, the balance being the net amount he should send you.

The "Long-Ideal" Hive.

Kindly refer me to any bee-papers or other sources of information about the Long-Ideal hive? CUBA.

ANSWER.—I don't know just where to refer you, although years ago there was quite a little scattered through the bee-papers about the Long-Ideal hive. Although used somewhat largely in Europe, it is used very little in this country. O. O. Poppleton is its chief apostle, a very able bee-keeper of Florida, who likes it much. All there is of it is to make the one story large enough to contain all the frames you want, so as to use no second story. Some use a queen-excluder so as to separate the hive into two compartments, one for brood and the other for honey. I'm not sure about it, but I rather think Mr. Poppleton does not use this excluder. Perhaps he will tell us something about this hive as he uses it.

Some Questions from a Beginner.

1. When a queen is introduced in a weak colony, why are queen-cells allowed to be capped. over? Does the new queen destroy these before hatching, or does she kill the queen after she is hatched?

2. Do you feed your bees in the spring to get them strong for the honey-flow?

3. In putting a super under a partly filled one, do the bees finish the partly filled one first, or the one just put on?

4. Do you keep all your hives in the shade?

5. I see in Gleanings some frames with the owner's name in raised letters made of comb and honey by the bees. How is this done? That is, how is the foundation fixed so the bees will do that kind of work?

6. Do you contract the brood-nest to crowd more honey and bees into the supers? If so, how many frames do you take out of a 10-frame hive?

7. Do you find the blacks as good honey-gatherers as the pure Italians?

8. Do you plant anything for your bees to work on? If so, what?

9. In hiving a new swarm is it right to give them the full 10-frames of foundation at once? MISSOURI.

ANSWERS.—They are not often capped over. They are generally emptied out by the bees before that. In case they are capped over, I don't know whether they are torn open by the bees or the queen, but likely the young queen is destroyed before she leaves the cell.

2. No; if there is an abundance of honey in the hive, that is enough. But I always like to have extra combs of sealed honey on hand to give to any colony that may need it.

3. They first finish the super that was first given, whether it be over or under the second.

4. No; but I wish they were all in the shade. Not that it makes any difference to the bees, but because it is pleasanter for the bee-keeper.

5. I'm not familiar with that sort of thing, but I can think of one way in which it possibly might be done. Let a comb be built out in the middle of the upper story with a dummy rather close to it on one side. That will give an entirely flat surface. When it is entirely sealed over, pick off the cappings so as to form the desired design, and return the frame, spaced a little farther from the dummy than it was before. The part that was already sealed will be left as it was, and the design built out further. Perhaps the design might be darkened, if so desired, by having the frame placed, (not before, but after the uncapping) next to an old, black brood-comb. I don't know how much more the spacing should be after the uncapping; possibly ¼ inch. If too much, the bees will build a fresh layer of cells over the entire surface.

6. No, and yes. I use 8-frame hives, and sometimes, before it is time to put on supers, a colony will have 10 or 12 frames of brood. When it is time to put on supers, only one story is left. When I used 10-frame hives, I always left the 10 frames.

7. At first I had pure blacks, and the Italians are away ahead of them. A cross between the two is as good for honey-gathering as the pure Italian blood; sometimes better. But this cross is likely to be cross, and I am doing something at working out the black blood chiefly because I don't like to work among hornets. Moreover, a cross is not likely to be as stable in character as a pure blood, and more likely to run out.

8. After trying many things I now plant nothing specially for the bees.

9. Yes; especially if the swarm is large.

How About the Black Bee?

I am a young bee-keeper of but limited experience, and would not presume to speak among our authorities. But I have taken much interest in the numerous statements concerning the black as compared with the Italian bee.

My own experience, such as it is, has been with the blacks. My average has been small, but I have, I think, done fairly well for the amount of attention given to the bees. I have had only one colony of Italians of pure blood. Of hybrids, I have had some, but I have a very intimate friend who is requeening with Italians, and has, I admit, obtained some prolific queens which produce good workers. He has, however, blacks which gather fully as much honey per colony as the best of his Italians.

But, don't you think that if our large bee-keepers had given to the black the attention that has been lavished upon the Italian, that the former would have been developed by a process of selection and careful breeding as the latter have?

From reports of my personal friends, and from the columns of the bee-papers, it seems that Italians have a tendency to degenerate, or to mate with blacks, thus making the black brood the leader. If this be true, does it not seem that they (the blacks) are the stronger on the wing? Did not Dr. Miller develop a strain of hybrids and blacks that gave famous results?

I will not myself attempt the development of the blacks, as the Italians have half a century of selection, and I expect to requeen with them, but in so doing, I do not admit that there is no virtue in the black, but that it is owing to care that our Italians are superior.

D. M. Macdonald poins out that the black is superior in his country where it has been developed. Now with all due respect, I wish to ask if the black bee is not worth something more than the powder to blow it up? It would take but little powder, and the blacks have gathered a lot of honey.

NEW YORK.

ANSWER.—It is hard to say whether the black bee would have equaled the Italian if the same care had been given to the black in proper selection. But between you and me I don't believe there has been such a very great difference in that respect. Little or no care was given as to selection with the blacks. Each colony was allowed to swarm at its own sweet will, without let or hindrance. In the great majority of cases, how much difference has there been with Italians? A man gets an Italian queen, and then pays little attention to anything unless it be to keep as much color as possible with little regard as to what goes with that color.

There is no question that there is a tendency to run toward black brood, and it is true that I have hybrids that are hustlers at storing, and so far I have not been able to find pure Italians that equal them as storers.

If you think well of blacks there is no need for you to spend a lifetime developing them. You can get them from those who think they are better than the Italians in the British Islands. Or, you can get blacks from Switzerland where they have been carefully bred, with more care probably than Italians have been bred in this country. There is probaly no set of bee-keepers in the world ahead of the Swiss in the matter of carefully breeding queens, and it is the general opinion among them that the blacks are decidedly ahead of the Italians. So if you choose you can settle the matter to your own satisfaction by actual trial in place of reasoning about it.

Now, after having said all this, I suppose you will ask me what I have to say about the powder business. I began keeping bees with pure blacks, and I think I had kept bees 5 years before ever I saw an Italian. Then I introduced Italians. So I ought to be able to say with some degree of positiveness how the pure blacks that I had compared with Italians; with more positiveness than you can, for, as you say you are a young bee-keeper, it is a rather safe guess to say that you never saw a pure black bee in your life, your bees probably having at least some Italian blood in them. And you have it from me as my deliberate conviction that my black bees as compared with my Italians were not worth the powder to blow them up.

Since the Italians were vastly superior to the blacks (mind you, I'm talking about the blacks I had, not about blacks in Switzerland or Scotland) there did not seem any special inducement to try to develop the blacks. But the crossing of the two bloods gave as good workers as the pure Italians—sometimes better. So I paid no attentioon to color, but bred from the best honey-getters.

Very likely you will ask, as others have done, why it is that I have not stuck to Italians, if I think Italians are better than blacks. Well, I did give Italians the preference for some years, and then, as I have already said, took up the hybrids because they gave more honey. But if I had it to do over again I would now probably have little or no black blood. The cross is not a fixed race like the pure bloods, and there is no certainty as to the character of the royal progeny. Moreover, in my own case, in getting good gatherers I have got a lot of temper that I don't like. Within the past 2 or 3 years I have ordered a score or more of untested Italian queens, so that now I have a number of yellow colonies, in the hope that I may find something among them nearly as good as my old stock without being so peppery.

If I had persisted in keeping to pure Italian stock, it is possible that I might now have as good gatherers as those I now have. If I were in your place I would try for pure Italian blood, or else I would get from across the water black blood that has been carefully developed.

A Bunch of Beginners' Questions.

1. What kind of bees are the best to keep for gathering honey, and for gentleness?
2. How many sections is the most you ever had of one colony in a season?
3. What is the best way to prevent swarming in the spring, when running for comb honey?
4. What is the best to feed bees in spring, and how do you feed it?
5. What time ought supers be put on in spring?
6. Do combs ever get too old for the bees?
7. Does black brood hurt the bees?
8. How can you tell when bees have foul brood?
9. How can you tell the difference between American and European foul brood?
10. Which is best to use, extracting or section supers?
11. Does it pay to use full sheets ot foundation in the brood-chambers?
12. Which is the best in sections, full, half, or 1-inch starters?
13. Is it best to feed bees in the fall? If so, what do you feed them?
14. What kind of hives are the best?
15. What is the best kind of section, plain or bee-way, 4¼x4¼, or 4x5?
16. How high should the hives be from the ground?
17. What is the best way to ventilate the hive?

NEW JERSEY.

ANSWERS.—1. Probably Italians are liked as well as any.

2. 300.

3. There is rarely any swarming in the spring unless it be what are called "hunger swarms." and the way to prevent that kind of swarming is to make sure the bees have plenty of stores in the hive.

4. Nothing is so good as sealed combs of honey saved over from the previous year. Merely place it in the hive next to the combs that contain brood, of course taking out an empty comb to make room for it. If plenty of honey is already in the hive, then there is no need to feed.

5. Don't put supers on so early as spring. As you are probably in a region of white clover, put supers on the hives about the time you see the very first white clover in blossom. which will likely be about the first of June.

6. No, so long as they are in good condition in every way.

7. I'm not sure that it hurts the mature bees; but it kills the brood.

8. If you have had no experience in the matter, better not try to tell yourself, but send a sample to Dr. E. F. Phillips, Dept. of Agriculture, Washington, D. C., and he will tell you what the disease is. It will cost you nothing, and if you write him in advance he will send you a box in which you can send the sample. and a frank for postage.

9. Stick a toothpick into the dead larva, and when you pull it out it will string out an inch or more before it breaks if it is American, while the European will stretch out only half an inch or less.

10. For some bee-keepers extracted, for some comb honey. It depends upon your market, your pasturage, your own ability, and perhaps some other things; and no one can find out which is better for you as well as yourself.

11. Yes.

12. Full.

13. If they have not enough stores to last till honey comes again it is better to feed them. No feed is better than good honey, but syrup of granulated sugar is generally used.

14. Movable-frame hives.

15. Each kind has its admirers. My own preference is for the one that is generally liked by the largest number of bee-keepers: the 4¼x4¼x1⅞ bee-way section.

16. In your locality it is well to have a stand that raises the hive from 4 to 6 inches above the surface.

17. It doesn't matter so much just how you ventilate, so you give ventilation enough. One way is to raise the hive by putting a block under each one of the 4 corners. I generally ventilate by having a very large entrance and an opening at the back end of the hive on top, letting the super come far enough forward to make the opening.

Reports and Experiences

Treatment for Laying Workers.

Jimson Ragweed mixes in a good bit of sense in his nonsense, but I wonder if he speaks from actual observation, or where he gets his authority for saying that "Within a few days, or perhaps within an hour, the laying workers will all be destroyed" after placing a hive-body containing the laying workers over a strong normal colony. (See page 226.) He rightly says that there are many laying workers in an infected colony, and he says that he believes every worker-bee, if driven to it, is capable of laying eggs. I think I have seen it stated that some scientist across the water found upon analysis that a large portion of the workers of a colony were engaged in laying. Under such circumstances what a slaughter there must be if "the laying workers will all be destroyed." Jimmie, you've got to "show me" before I believe a single one is destroyed. I have never observed any such slaughter, and am more inclined to believe that the laying workers simply give up their disreputable business, and return to honest work.

You say this is the only solution of the problem you know of. Ever try giving such a colony a virgin queen just out of her cell? I have; and it works all right in this "locality."

I. DENSY.

Pretty Good Year with Bees.

I have had a pretty good year with the bees. With 40 colonies, spring count, I have increased to 82, and have taken 4,000 pounds of clover honey; besides the hives are full of honey-dew and clover now. I sold my crop at 8 cents per pound f. o. b. here. I like the "old reliable" American Bee Journal very much.

J. W. SHAW.

Twin Bluffs, Wis., Aug. 19.

Very Dry and Hot Weather.

The weather has been very dry and hot here; but a few light rains have started the honey-flow, and on Monday, Aug. 22, the hive on scales showed a gain of 8 pounds.

Clarinda, Iowa, Aug. 24. J. L. STRONG.

An Encouraging Report.

The bees were doing so badly last spring that I thought they were going to die, but they have done first-rate since the middle of June. I have one colony which filled a hive and two supers with honey, and I think they will fill one or two supers more. They were all very weak at the time of the honey-flow.

Mosca, Colo., Aug. 10. A. M. BLOSSER.

Moderate Honey Crop.

Owing to a cold, wet June, the bees built up very slowly, and were not ready for the clover bloom, which was abundant—the most profuse for years. The last of the honey season has also been wet so that the surplus crop of honey will be a moderate one. The quality is very fine. Our sources of surplus honey are: Raspberry, clover, and fireweed; but both the former and the latter lap over the clover flow.

The demand for honey will be good.

I have been able to hold 50 per cent of my colonies without swarming.

Caribou, Me., Aug. 8. O. B. GRIFFIN.

Fair Crop of Honey.

We have had 2 bad years for bees, owing to too wet early in the season, then too dry later. Last year the honey was mostly from honey-dew, and was very dark, almost black in color, and not much of that either. This year we have a little more in quantity, and very nice and white in color, although not a large crop. Bee-keepers here are quite hopeful and encouraged. There are quite a number of colonies in this neighborhood.

EDWIN HAVILAND.

Forest Hill, Md., Aug. 17.

Bee-Keeping in South Florida.

On page 254, Hon. Eugene Secor speaks of the abnormal nature of 1910 in Iowa. Perhaps bee-keepers would not object to a short report of the unusual condition here. I came to South Florida to enter a homestead in April, and found the few bees kept here in box-hives. Modern methods are unknown in this part of Lee County. The box-hives were heavy with honey gathered from orange and grapefruit bloom in February, and a few from pennyroyal all through the winter and spring. Up-to-date methods would have called for free use of the extractor.

This month there is a strong flow of nectar from cabbage palmetto. The bees are working very vigorously on it. Not having room in the hives to store it, the bees have taken to swarming. This gives two swarming seasons in 1910, the usual time for South Florida being January and February, and the unusual one for August. The swarms sent out at this time are as large as those put out earlier. The unreadiness of these bee-keepers is seen in the fact that they have no hives to use and the bees are absconding. The wise (?) ones say, "Let them go. They will do no good this late in the year." I am inclined to think they will pull through. Pennyroyal is coming through, having already started everywhere in the woods. In less than 60 days, it will be in bloom. It would be a very poor afterswarm that can't gather enough honey, if the present flow lacks only a few days, to carry them until pennyroyal is ready for storing. This looks like a promising land for bees, but, as the matter has never been properly tried out, one can't be sure of it.

A number of apiarists have written inquiring about homesteads and bee-keeping here. Uncle Sam wants you to have one of them. About the honey-flow, I can only guess. It looks good, but no one knows. Come down and look for yourself. I trust that this abnormal state of things may be at least of some interest to your readers.

FRANK M. BALDWIN.
Lee Co., Fla., Aug. 17.

Banner Year for Bees.

This has been a banner year for the bees with me, as I have averaged 3 cans of honey, or 180 pounds to the hive. I have increased my spring count of 45 colonies to 80.

D. H. LEONARD.
Huntington, Utah, Aug. 18.

Bee-Keeping in Colorado.

The past few weeks have been a little more favorable for the bees, and quite a good many colonies in Northern Colorado have gathered enough honey to carry them through the winter, but there is no surplus.

Denver, Colo., Aug. 27. F. RAUCHFUSS.

Bees Did Very Well.

Bees have been doing very well in this locality, averaging more than 120 pounds of extracted white clover honey to the colony, spring count. Had not the flow been cut short by the hot and dry weather, we would have had a record season.

AUGUST F. KOCH.
Middle Amana, Iowa, Aug. 26.

Rather Poor Honey-Year.

The seasoon this year has been rather poor with us so far. The honey-flow from white clover ceased about July 7. The flow in June was remarkable, but ever since then the bees have scarcely been holding their own. Knotweed is just now commencing.

(Rev.) ALOIS J. KLEIN.
Brainard, Nebr., Aug. 17.

Not a Large Crop of Honey.

Our honey crop is about half of what we expected in June. The honey came in so fast that we gave the bees lots of room. We had 62 colonies and put on nearly 4000 sections. We will get about 1-3 of what looked big to us in June. It has been terribly dry the last 6 months, but it is trying to rain now.

A. N. COOKE & SON.
Woodhull, Ill., Aug. 8.

Why Not Simply "Bulk Honey"?

On reading Mr. Scholl's discussion as to the name to be applied to the kind of honey that Mr. Scholl champions, on page 220, one is left just a little confused as to the name Mr. Scholl really does advocate. If I have counted correctly, he calls it "bulk comb honey" 8 times, and 11 times he calls it "bulk-comb honey." Which does he really want it called? Of course, no matter how written, the spoken name will be the same.

But is either form correct? According to the Standard Dictionary comb-honey is a compound word, and if the word "bulk" is to be used as an adjective applying to it, the form should be "bulk comb-honey."

But is it really comb-honey that is under discussion? As to this, Mr. Scholl is at loggerheads with himself. He first says: "All the comb honey produced other than section honey must comb under the one head of 'bulk comb honey'." According to that the honey mentioned by Louis Macey, three pages further on—comb cut out of frames without any extracted honey as packing—would be included under the name. But afterward Mr. Scholl says: "It takes extracted honey to fill up the containers of comb honey to make what is known as 'bulk-comb honey'." Doubtless this is the more considered view of Mr. Scholl. So then the more appropriate name could be "bulk comb and extracted honey," with one or more hyphens properly distributed.

At once objection rises to such a long and cumbersome name. But if "extracted" may be left out of the name, why not "comb" as well, leaving us tne much more convenient name "bulk honey"? Indeed, unless I am greatly mistaken, that was the name first used by Texas bee-keepers, and perhaps the one in more general use in common conversation at the present day. The name is just as distinctive, for the word "bulk" is probably not used as applying to any other form of honey. Either call it "bulk comb and extracted honey," or else call it "bulk honey."

I. DENSY.

Honey for Burns and Scalds.

For burns and scalds pure extracted honey is very good; it will generally relieve the pain in a very short time, and induces the wound to heal very rapidly—Dr. Gunn's Family Physician, 1865.

In one instance, the writer had a chance to test the foregoing: A young man happened to scald both hands and part of his arms with boiling water. I happened to be present, and without delay I took some honey which was near at hand, and placing his hands in a vessel, I covered the scalded parts with honey. A thin layer of cotton was then placed over it, and finally a cloth was wrapped around the entire wound, keeping the cotton and honey in its place. This was repeated as often as 3 times within 4 hours, and the pain was gone, leaving no bad consequences at all. Of course, it took some time to form a new skin over the scalded hands, and during that time they were left with cloth wrapped around to shut off the air.

INDIANA.

A Bee Watering-and-Feeding Trough.

I have invented a watering-and-feeding trough for bees that suits me very much, and which may be of interest to others.

Make a V-shaped trough of any length and depth; make the ends flush with the top edges of the sides; to prevent leakage, paint the inside with hot beeswax; put on a lid ⅜ or ½ inch thick, leaving a space ⅜ of an inch on each side between the top and side boards; fasten the top board to one small nail, but do not drive it down tight; drive a small nail in the opposite end, but have it loose so that it can be raised easily to move the top-board for water or feed; fasten in a convenient place in the shade, away from the chickens or other stock. I fasten mine to the side of a maple tree about 5 ½ feet from the ground. The bees do not get drowned in the water, or hogged in the feed by this method. For a long grin or smile across your face, cover with glass instead of a board, or peep in at one corner when bees are watering or feeding.

I. M. NEWMAN.
Hewins, Kans., Aug. 13.

Sweet Clover as a Honey and Forage Plant.

I have a 10-acre field of yellow sweet clover, and 5 acres of white sweet clover. The yellow began to bloom April 25, and continued to bloom until June 15. July 1 I had cut the seed crop; and threshed it July 23. I got about 3,000 pounds of fine seed. I did not get to cut the white until Aug. 1st. The hard freezing we had in April had no effect on the yellow whatever, and it was budding and begining to bloom, but it surely ruined the first blooming of alfalfa, and every one in our locality cut it down so the poor bees had to wait for the second bloom; but the yellow sweet clover said, "Come on. I will keep wou busy for the next 50 days," which it did, and my home apiary of 75 colonies built up wonderfully, and were in fine shape for the big honey-flow from the seed crop of alfalfa; and from my hive on scales I have extracted 130 pounds, and now it weighs (Aug. 21) 181 pounds. My out-apiary, that has no access to the yellow sweet clover, has done no good, at least none of them have filled more than 2 extracting supers, while plenty of the home colonies have filled 5 and 6. I don't understand why every bee-keeper in the land doesn't have at least 5 acres or more of the yellow sweet clover.

Now the white is all right in its place, but it blooms later, and therefore the early blooming is the most desirable—the one that brings us the most in dollars and cents. As for hay, it is much better than the white, as it is not so coarse, and consequently cures quicker. As for grazing, I think it has no equal, as I have turned my cows on it in all stages without any sign of bloat, and this you postively can't do with alfalfa or other clovers.

In harvesting the seed crop this season, I tried binding it with a binder, and it simply worked fine; but you must get up about 2 or 3 o'clock in the morning, while the dew is on, to keep from wasting the seed: and stack it also before it gets too dry.

After I cut the 5 acres of white for seed, I plowed it and have sown it to buckwheat, and as soon as the buckwheat is cut I will sow to wheat, and next spring sweet clover will come from the seed in among the wheat After the wheat is harvested I will bave some fine clover pasture all fall and spring; also bloom and seed later.

I now have built up my land in this way until I can raise anything on it, and when I first sowed it to sweet clover it would hardly grow it.

I cut some spring sowing for hay, and stacked it near the barn, and whenever I would, let a horse loose he would make straight for the stack, and eat it as if he hadn't had anything to eat for a day or so. My threshed sweet clover straw I expect to feed next winter to cattle and horses, as it is bright and nice.

R. L. SNODGRASS.
Augusta, Kans.

Notably Wet Season.

The present season is notable for its excessive rain, spring and summer. Our main honey-flow, which begins usually early in May, was destroyed by almost unceasing rains. Owing to the abundance of rain, white clover yielded longer than usual, and so the bees are in fine condition at present for the fall flow, which is mainly from goldenrod and white asters. If the weather is favorable, we can count on a fine honey-flow.

In 1906, it happened that a swarm of bees issued September 6, which was hived on combs not half drawn out, and this only half of a Langstroth frame, and this colony went through all winter with only what it gathered during the short time from asters, and goldenrod.

BRO. ALPHONSE VEITH.
St. Meinrad, Ind., Aug. 17.

Unusually Dry Season.

This year has been an unusually dry one, but a good one for bees. I use 10-frame hives, full sheets of foundation, make my own bottom-boards 18 x 25 inches, and a hood 16 inches deep, just large enough to slip down over the hive. I use 2 supers at a time, and winter the bees on the summer stands. I set my hives on 4 bricks. I watch my bees closely, and disturb them little.

One pleasant afternoon in June, I found a sample copy of the Journal in my mail-box. Its neat appearance, and a hasty glance at its contents, impressed me favorably, and I ordered it and a queen. In due time both came along, and while I expected a nice Italian, I think from appearance she is of Dutch-Roosevelt extraction!

D. V. FISHER.
Omaha, Nebr., Aug. 8.

Bee-Diseases in Indiana—Fruit-Growers and Bee-Keepers.

The second Annual Report of the State Entomologist of Indiana shows that there are no less than 22 counties in the State of Indiana in which the State Inspector for bee-diseases discovered foul brood during the season of 1909. In nearly all of these counties both kinds of foul brood appeared. During the inspection season there were 513 visits made to 480 apiaries. In these visits a total of 6036 colonies of bees were inspected. Out of this number 1431 were found to be diseased, either with American foul brood or European foul brood. In this entire number it was necessary to burn only 58 colonies.

which speaks well for the way in which the work was received by the average bee-keepers.

It seems that the foul-brood law of Indiana is appreciated by bee-keepers. Fruit growers, as well as bee-keepers, ought to appreciate this, on account of the indirect benefit derived from the honey-bee. Bulletin No. 75 U. S. Bureau of Entomology, Department of Agriculture, says:

"Fruit-growers, as a rule, recognize the value of the honey-bee for their industry. Taking into consideration the insurance of pollenation by transporting colonies of bees to places where their services are needed, it is safe to say that the indirect benefit of the bee-keeping industry annually adds to the resources of the county considerably more than the amount received from the sale of honey and wax."

Considering the value of the honey-bee for fruit-growers, and, at the same time, the danger of that dreaded foe, foul brood, which threatens to destroy the bee-keeping industry, it would be wise that all fruit-growers and horticulturists stand together with the bee-keepers in one body and demand and urge the legislature to establish a foul-brood law. This ought to be established in all States where there is none, and where bee-keeping is practiced. The Government has made to protect our home industry against foreign competition; why should we harbor the enemy in our own bosom, which threatens to destroy the resources of our country through which we lose more, and far more, than we probably would if tariff laws were taken away? I am apt to believe that if all those interested would show and prove to the legislature (of their State) that the foul-brood law is necessary, the elgislature could not close the eyes and lull into sleep, since it is the first duty of every legislature to give protection.

INDIANA.

Bee-keeping for Japanese Soldiers.

Although apiculture in Japan is in its infancy, the people all over the Island Empire have awakened to find for the new industry a future prospect. Not only farmers, professional instructors, and school-teachers are mad with bee-fever, but even soldiers are given an opportunity to study bee-management. Colonel Fuse, of Osaka Regiment, is the enthusiastic leader of apiculture among the army men. He found that a colony of bees represents his ideal army. He wants his soldiers to learn the noble lesson of the industrious, obedient and co-operative spirit of the "bee-people." It is his intention to establish an apiary in the regiment. Mr. U. Yahata, the President of the Bee-Keepers' Association of Tenkachaya, Osaka, is appointed as instructor. By this enterprise, the colonel expects the soldiers not only to enjoy their spare time more profitably during their army life, but when they return to their respective farm homes, they would not regret the bee-stings which they received in the regimental garden—Japanese Bee-World.

San Francisco, Cal. S. ANIYA.

Preparing Bees for Outdoor Wintering

1st. After the fall honey-flow is over remove all the supers containing honey and sections. Remove the sections at once, one super to each hive, or, if empty supers are on hand, place one on each hive. This will give the bees time to seal it to the brood-chamber before the cold weather sets in.

2d. See that each colony has 30 pounds of stores. If any are short now is the time to feed, for the empty super makes a splendid feed-box. The feeders I use are empty fruit-cans, quart size, which can be gotten at hotels for the asking. It is the cheapest feeder, and is as good as any. Remove all tin at the open end, fill with syrup, take a piece of muslin large enough to cover the top of the can, allowing the sides to come down for a rubber band to hold it to its place. Invert on the frames, and give each colony the required amount at one feeding. You will be surprised to see the bees empty these cans. I have had colonies short of stores that have emptied 6 cans in a single night. I have no trouble with robber-bees when feeding this way. Small yards can be fed on the first round, which is the better plan, for the same excitement is going on in all hives at the same time.

3d. Now every colony has plenty of stores, and all crevices sealed. Now we are looking for a good packing, which should be used not later than the first of November. Take a plastering lath, rip it in halves, take these halves and nail together a frame to fit the inside of the empty super, also put a piece across the center of the frame to keep it from sagging on the brood-frames. Now cut a piece of fly-wire netting the size of the frame just made, tack this on the frame and it is ready to put into the empty super, wire side up. This gives a bee-space of ¼ inch between the packing and the brood-frames. The bees can move from one frame to another without going down, which is a great help in case the honey becomes all on the occupied combs. Another advantage of the wire frame is that the bees can not gnaw through like they will when burlap is put right on top of the frames, which will cause a mess of chaff to work down between the combs. It will also exclude mice from getting into the packing.

Now put a piece of burlap over the wire frame, and fill the super full of wheat chaff (I prefer chaff from smooth wheat); press it in tight, put on the cover, raise one end of the cover by putting a nail or chip the thickness of ⅛ inch between the cover and super; this will allow the dampness to escape, and there will be no moldy packing or smell in the super when removed in the spring, as is often the case if the cover is tight.

Now the colonies are ready to meet any changes of the weather—cold to warm and warm to cold—as the bees are always dry, which assures their coming out all right in the spring. If convenient, shelter the northwest sides of the hives by putting up some kind of a wind-break. I also reduce the entrance to one inch, which must be watched so it will not become clogged with dead bees.

By packing bees this way, we can leave them right on the summer stands with the least fear of losing a single colony. Of course, I am speaking for the Middle Atlantic States. I have not lost a colony since I packed them in the above way. I hope others may be just as successful.

Westminster, Md. J. M. MYERS.

About Half a Honey Crop

This is a very poor season for bees in this locality. April and May not only kept them at a standstill, but reduced them in numbers, and I really believe they were weaker the middle of June than the beginning of April. The queens stopped laying altogether in May, and most of the colonies became practically broodless. After noticing this, I began feeding them, and continued for a whole week, every evening, to stimulate brood-rearing. In this way I succeeded, for after the week ended I found quite a lot of brood in every hive. But the drouth kept right on, and we didn't have any rain up to this date since last year—not to speak of, at least not around here—and consequently no bee-forage. In 40 colonies only 6 have swarmed, which, of course, I considered lucky. In this way they came out in fair shape to take hold of the sweet clover, which is getting a good stand here. This is a plant we did not know anything about a few years ago. Were it not for it there would not be anything of a honey crop for me. White clover has failed the last 3 years, and on the little there was the bees did not seem to work.

As things look now I expect a little over half a crop of honey, or about an average of 45 to 50 pounds per colony. I run for section honey only. My bees are partly Italian and partly hybrids. I find it rather hard to keep Italian blood, as there are only blacks around here. We are hoping for a better season next year.

I consider the American Bee Journal a great help to any one who wants to make a success of keeping bees. JOHN SAMES.

Shakopee, Minn., July 27.

The Jones Method of Non-Swarming

Last winter I sent to Dr. Henry Jones for a copy of his "Radical Cure for the Swarming Habit of Bees," and tried it last month on 9 colonies of Italian bees. I found the plan a failure, and its effects were to make 5 out of the 9 colonies so treated swarm more than 15 colonies not so treated. I am allowing these to swarm naturally, half of which have cast first swarms. I had 23 colonies, spring count.

I became discouraged with the Jones plan, and have discontinued it. I am in a pretty fix, as I relied on his plan to keep down swarming, so I did not buy any new hives for the new swarms. I have taken care of 7 new swarms so far by doubling them with weak colonies, and hiving 4 in old hives that were left over. If the rest of my colonies swarm, I will have to put them in candy-pails, nail-kegs, small boxes, or any old thing, and take them up in the fall; but I think the late drouth will hinder some of these from swarming.

My bees are seemingly doing no better at honey-gathering than last year, when they gathered only about half a crop. Basswood is not blooming here on account of the injury by frost late last spring, and clover has been dried up suddenly by the late drouth, which was broken yesterday.

I would like to hear from others who have tried the Jones plan of preventing swarming this season, and learn if their experiences have been like mine. I followed his directions to the letter. The following is an account of the doings of each colony treated by myself last month, as before stated:

(All queen-cells except one were cut out on the 6th day in all colonies that cast a swarm. R stands for "swarm returned;" H for "swarm hived.")

No. 1, treated June 21—run for comb honey.
No. 2, treated June 22—run for comb honey.
No. 3, treated June 22—run for comb honey.
No. 4, treated June 20; swarmed June 21—R; swarmed June 23—; swarmed July 3 H.
No. 5, treated June 20—run for comb honey.
No. 6, treated June 20; swarmed June 29, swarmed July 2.
No. 7, treated June 8; treated June 8 again.
No. 8, treated June 20—run for extracted honey.
No. 9, treated June 12; swarmed June 20.

Highland, Mich., July 17. WM. MARTIN.

An Ex-Miner Bee-Keeper on Hive-Ventilation

Do you know what ventilation is? The question appals me. It is so big, so varied, and withal so strange. If bee-keepers could but understand what good ventilation is, they would understand why the bees get sick, and why they swarm. Any practical coal-miner will tell you that of all the stubborn places to reach with ventilation is upon the hilltops. Air will travel down hill and return against considerable resistance, but to get it up on the hill you must apply force. All the works must have air, or work ceases then. All the work in our hives lies most upon the hill, above the main air-course, and but one place to receive and discharge it. It is a scandalous fact that he who devised our hives did not take into consideration sanitary conditions.

For 20 years coal-mines furnished the writer with opportunities to study and learn the creation of foul air, the effects of it, and how to overcome it. Let me tell the bee-keepers that the powers which create foul air are as plentiful in the hives as we find in the mines. When I first began keeping bees, it was my opinion they did not breathe, and for that reason I saw no provision for ventilation in the construction of the hive. But I was not long in discovering my error, and immediately there was something doing in that little apiary to provide the bees with a more liberal amount of air. With all my mine experience, I was slow in establishing a proper system of circulation. When the bees hung out I blocked-up the front end of the hive, which gave relief, but carried a dread of chilled brood and robber-bees.

An unusually cross colony led me further on. I sneaked up in the rear and applied the block at the rear end. Before they apprehended me, I had the wind whistling across the bottom-board and escaping at the other end, which afforded more relief than anything I had tried. I then removed all cleats at the rear end of the bottom, and built up strips on the side-rails as fast as the colony required more air. I had the problem solved, and have been busily engaged for a number of years investigating what could, and what could not, be done with plenty of air in my hives. Those who expect to stop all swarming by blocking up on the corners will meet with disappointment after a while. So will those who apply the double entrance. But they both will stop many a swarm that would issue had they been given less air. I find a cause a stubborn one, too, not room—which my big 2½-inch holes at each end of the bottom-board will not overcome.

There are a variety of foul airs. We had them in the mines, and "Uncle Joe" finds them in his hive. I find that honey, old pollen, glue, along with old combs, throw off an odor, or gas, which, when heated up by the bees, is intensified to such a pitch that after the bees breathe it over a few times it makes them sick. Just the same as white and black damps do to the miner. They go outside and cling to the front end of the hive. Some call these lazy bees, but you would think differently if you and your family were obliged to dwell in similar insanitary conditions. They are sick from foul air! And that's not all, the queen is packing up and getting ready for a trip to the health resort. To live and keep her health she must look about for relief, and she finds it only through swarming. I have had them so sick and disgusted with conditions that they would "pull out" without even making any preparations (queen-cells).

How do you expect to have healthy queens and do as you do? Every so often you go and unpack her baggage, which the bees have put up in good faith that mother might have a change. Then the bees are not so bad off, for they can go out and in as they choose, but *she* must remain with the condition. You remove the queen-cells, and by so doing keep her at home.

Take two 1-frame observation hives; select 2 equally good queens; along with each queen place an equal amount of bees; place one of these in each hive—one you stint with air, and she soon makes preparation for swarming; the other one give all the air she requires, and she stays with that single comb all summer. So then don't talk room for brood, to me.

It looks queer when the 10-frame colonies all swarm and the 8-frame ones do not, when all are opened wide at each end of the bottom-board just alike. There's the condition that no bottom ventilation reaches, but zigzag the supers and out goes your gas, and the bees stay at home. Always two ways to skin a cat. I do not zigzag, nor do I care to. Learn the cause and then hunt the relief.

What happens after removing queen-cells? After a while her needed trips to a health resort which you stopped has got her quite sick; in fact, has become chronic with her, and after a while may be it's foul brood. You call the doctor (inspector); he recommends the removal of all old work, and to put 'em on the health-resort treatment for a cure. You remove the cause, and may be her, too, but you have had a strenuous time; lots of bother and worry—a lot more than it takes to furnish them with plenty of pure, fresh air, which will keep them all well, and you happy. J. P. BLUNK.

Moorland, Iowa.

Wants, Exchanges, Etc.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

FOR SALE—Sweet Clover Seed after September 1st. Wm. Craig, Luce, Mich.

FOR SALE—160-lb. honey-kegs at 50c each f. o.b. factory. N. L. Stevens, Moravia, N. Y.

ITALIAN Untested Queens, 75 cents; Tested, $1.25. Breeders, $5.00 each. E. M. Collyer, 8A12t 75 Broadway, Ossining, N. Y.

FOR SALE.—Alfalfa honey in new cans and cases; 7½ cts. per lb., f. o. b. 9A3t Geo. E. Coffin, Route 2, Parma, Idaho.

MAINE-BRED Italian Queens—Untested 75c Tested $1. Nuclei and full colonies. Red-clover strain. Write for price-list. 8A3t. Eugene Watson, R. F. D. 2, Madison, Maine.

FOR SALE—Golden Queens that produce 50 to 100 percent 5-banded bees. Untested, $1; Tested $1.50; Select Tes, $2; Breeders, $5 to $10 8A12t J. B. Brockwell, Bradley's Store, Va.

FOR SALE.—About 60 colonies of bees in 8-frame hives, all heavy with honey. Price, $4.50 per colony, f. o. b. shipping point. 9Atf Robert Bufe, 35 11th St., Troy, N. Y.

MY APIARY of 157 colonies and all the things used to run it will be for sale in October. Price will be low. Parties interested write for full particulars. 9Atf Edwin Bevins, Leon, Iow

FOR SALE or Exchange for small farm—Novelty Mfg. Plant—building, lot, engine, planer, matches, etc. full equipment. Good business. Will deal all or part. Address, A care American Bee Journal.

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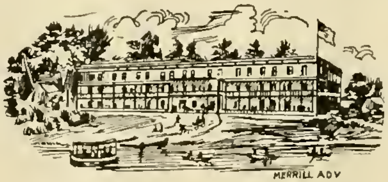

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C. W. Harmon Co., 31 Josephine St.,
8Atf Asheville, N. C.

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FOR SALE—75 to 100 Colonies Italian Bees in 8-frame hives; hives nearly new, and all heavy with honey. No disease. Price, $5.00 per colony f. o. b. shipping-point. Address, 8Atf Wm. J. Healy, Mineral Point, Wis.

FOR SALE.—About a ton of fine White Clover Honey, all capped before extracted. Price, $5.40 for one 60-lb. can, or 8½c per lb. for larger orders. Sample mailed for 10c. 9Atf Dr. S. B. Smith, Willow Springs, Ill.

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FOR CALIFORNIA.—I have to sell an out-yard of 100 colonies of bees more or less, built on full br. F., full stores, in L. size, b. and sh. s., dovet. redw.; 3 coats white, sheeted cover, each hive and colony a model. A snap for the buyer. Address, Joseph Wallrath, Antioch, Cal.

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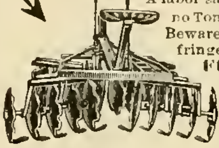

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Tested	1.00	5.50	10.00

5A5

Wm. KERNAN, R. D. No. 2, Dushore, Pa.

Sections at $3.50 a 1000

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one-piece 4¼x4¼x1⅞ two-beeway Basswood Sections. They are No. 2 quality, and listed at $5.00 per 1000. **Send in your orders now, before they are sold out.**

Our Shipping-Cases

are recommended by the largest honey-buyers in the country. Covers and Bottoms are one piece; everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass at $13 per 100; Crates of 50, $7.50; Crates of 25, $4.00.

Write for Catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee-Supply Co.
Nicollet Island MINNEAPOLIS, MINN.

Tennessee-Bred Queens!

**All from Extra-Select Mothers,
Davis' Best, and the
Best Queens Money Can Buy**

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

	November 1st to July 1st			July 1 to Nov 1				
	1	6	12	1	6	12	Select Breeder -	$4.00
Untested	$1.00	$5.00	$ 0.00	$ .75	$4.00	$7.50	Nuclei; no queen 1 fr	2.00
Select Untested	1 25	6.50	12.00	1.00	5.00	0.00	" " " 2 "	3.00
Tested	1.75	0.00	17.00	1.50	8.00	15.00	" " " 3 "	4.00
Select Tested	2.50	13.50	25.00	2.00	10.00	18 00	Colony, " " 8 "	8 00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,

Dealer in, Importer and Breeder of
ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
Ewell Station on L. & N. R. R.

SPRING HILL, TENN.

Please mention Am. Bee Journal when writing.

HONEY AND BEESWAX

When consigning, buying,
or selling, consult

R. A. BURNETT & CO.

199 South Water St. Chicago, Ill

Please mention Am. Bee Journal when writing

Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

Please mention Am. Bee Journal when writing

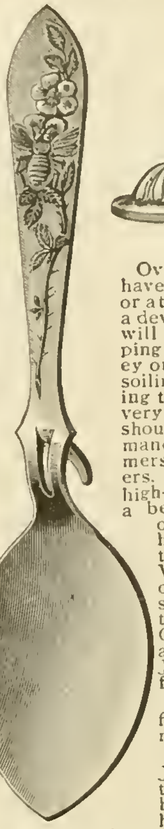
MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.
S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
ARIZONA—H. W. Ryder, Phœnix.
MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

An English Honey-Spoon


About three-quarters size.

Over in old England they have a handy honey-spoon, or at least a spoon that has a device in its handle that will prevent it from dropping down in the jar of honey on the dining-table, thus soiling the fingers and spoiling the table-cloth. It is a very ingenious idea, and should have extensive demand among honey-consumers, especially bee-keepers. It is well plated on high-class nickel, and has a beautiful raised design on the upper side of the handle, as indicated in the picture herewith. We have secured some of these very unique spoons, and will mail them at 90 cents each. Or, we will send spoon and the American Bee Journal one year—both for $1.75.

The spoon would be fine as a gift for Christmas, birthdays, etc.

The editor of the Bee Journal has used one of these spoons for a number of months in the honey-glass which is always on his table, and he would not like to be without this spoon again, as it is so convenient, and also unusual in this country. We can fill orders promptly now. You certainly would be pleased with this honey-spoon, and so would any one to whom you might present it. Send all orders to,

GEORGE W. YORK & CO.,
146 W. Superior St., - CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

We are in the market for

HONEY

Both COMB and EXTRACTED. State quantity you have to offer, with all particulars.

HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

Root's Goods in Chicago

Last April we moved to this location. We were unable then to arrange our stock as we desired as the busy season was upon us. April, 1910, finds us in better shape than we have ever been since the opening of this office.

Our stock is now conveniently arranged, hence no confusion in filling orders. We now have on display in our show-room a complete line of our supplies. Call and see them. From this date we will have cars from the factory about every 10 days.

Have you received our catalog for 1910? If not, we want you to have it. A postal card request will bring one.

Gleanings in Bee-Culture

If you have not seen a late copy of our paper, which is issued twice each month, you can't tell from a brief description how much valuable information each issue of it contains. Each issue is fully illustrated Our writers are the very best. A trial subscription of six months (12 different copies) will cost you only 25 cents.

Alexander's Writings

Mr. Alexander was one of the largest, if not the largest, bee-keeper in the United States, and what he has told of his methods must necessarily be of interest to large bee-keepers. He kept bees for over 40 years, and produced honey by the carload. His writings are practical, and what he has done others may do if they care to follow his teachings. Here is what a prominent bee-keeper says of his book:

"Alexander's Writings are the best thing I ever read; practical, enthusiastic, sympathetic, encouraging. I predict an enormous sale of the book. Why not get out an edition with cloth cover? It's worth while. Wish you could print more such books." WM. BAYLEY.
43 N. Brighton Ave., East Orange, N. J.

This Book is Sold only in combination with Gleanings

From now until January 1, 1911, we offer one copy of the Alexander book with every yearly subscription to GLEANINGS, new or renewal. You get BOTH for subscription rate alone, which is only $1.00.

Canadian postage, 30 cts.; foreign postage, 60 cts. per year extra.

Power Extractors

We believe all of our extractors are about as near perfect as it is possible to make them. For large apiaries one of our power machines is a great advantage. A circular of these will be sent upon request.

Read what a large producer says:

LANG, CALIF., Sept. 26, 1909.

Gentlemen:—Owing to the fact that power extractors are not in general use at the present time, it may be of interest to you to know that I used a Gilson engine "1 H. P.," together with the latest model of the 6-frame automatic extractors, "Roots," for this season's extracting. I was surprised and delighted with the work done. In extracting our heavy white-sage honey it not only cleans out the combs much cleaner than can be done by hand-power, but does it at a minimum of of expense. The cost of gasoline and oil used being only 16¢ per ton of honey extracted. It takes the place of a man at $40 per month and board, so one can readily see that it much more than paid for itself in the one season, besides doing much better work than could be otherwise. The above cost of extracting is given on the basis of gasoline at 25¢ per gallon, which is the cost here. Truly,

H. A. SLAYTON.

Our Aim for the Season of 1910

This year we aim to give our customers the very best possible service. Remember, for low freight-rates and quick delivery, Chicago is as well located as any city in the United States.

Our Location and How to Reach It

The A. I. Root Co. 213-231 INSTITUTE PLACE.

One block north of Chicago Ave., cor. Franklin St. Take any car going north on Wells St. Get off at Institute Place, ½ block west to Jeffery Bldg. Take elevator to 6th floor. Or take N. W. Elevated to Chicago Ave. and walk ½ block north on Franklin St. Tel. North 1484.

New England Bee-keepers! **New Stock at Factory Prices**

—:PROMPT DELIVERY:—

Cull & Williams Co.

Providence, - Rhode Island.

Queens **Of the 3-Band Leath'r Color'd Strain from Imported Stock**

75 cents each. Selected, $1.00.
Circular Free.

3A8 **O. F. Fuller, Blackstone, Mass.**

REF.—Arthur C. Miller, Providence, R. I.

Golden and Red-Clover Queens... **From Extra-Selected Mothers**

Untested, 75c; six for $4.00.
Selected Untested, $1.00; six for $5.00.
Tested, $1.50.

Safe arrival guaranteed. Twenty-one years' experience. Send your orders to

E. A. Simmons, Greenville, Ala.

Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

Not Cheap Queens, But Queens Cheap

Prices of 3-Band Queens	1	6
Untested Queens.................$	.75	$ 4.20
Tested Queens....................	1.00	5.70
Breeder's Queens................	5.00	

Golden or 5-Band Queens	1	6
Untested Queens.................$	1.00	$ 5.70
Tested Queens....................	1.50	8.70
Breeders' Queens................	10.00	

3-Band Nuclei	1	6
One-frame, Untested Queen...$	1.75	$11.20
Two " " " ...	2.25	13.20
One " Tested " ...	2.00	11.70
Two " " " ...	2.50	14.70

5-Band or Golden Nuclei	1	6
One-frame, Untested Queen...$	2.00	$11.70
Two " " " ...	3.00	17.70
One " Tested " ...	2.50	14.70
Two " " " ...	3.50	20.70

Reared from the best 3 and 5 Band Red Clover Italian Breeder Queens.

☞ DIRECTIONS FOR BUILDING UP WEAK COLONIES—10 cents.

W. J. Littlefield, Little Rock, Ark.

Please mention Am. Bee Journal when writing.

Miller's Italian Queens

From Superior Working Strain

By return mail, or your money back. Northern bred, from the best red-clover working strains in U. S. No better hustlers; gentle, and excellent winterers. Untested, from my 3-banded SUPERIOR BREEDER, 75c; six, $4.00; twelve, $7.50. Safe arrival guaranteed. Circular Free. **ISAAC F. MILLER,**
8A2t REYNOLDSVILLE, PA.

Please mention Am. Bee Journal when writing.

Of Interest

FOR the past 50 years New England bee-keepers have purchased Bees, Queens, Bee-hives, Supers, Section-boxes, Comb Foundation, Smokers, Honey-jars, and other necessary bee-supplies, of the Reliable and long-established firm of W. W. Cary & Son.

I have recently purchased the above business, and will continue it at the same place as before. I have been associated with the firm for the past eight years, and have had experience in all branches of the business.

I have a fresh supply of the A. I. Root Co.'s goods, which I am able to supply you upon short notice. Send in your orders early and I will give them my best attention. 4A6t

Send for Bee-Supply Catalog.

EARL M. NICHOLS,

(Successor to W. W. Cary & Son)

Lyonsville, Massachusetts

Please mention Am. Bee Journal when writing.

M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

Please mention Am. Bee Journal when writing.

Wanted

White Clover and Basswood Honey in tin cans. Will pay 8c cash f. o. b. Wilton. Mail sample and state how much you have. 8Atf

Edw. Wilkinson, Wilton, Wis.

Please mention Am. Bee Journal when writing.

MUST SELL

To dispose of our Queens **at once,** we will make this special price as long as they last, at 50c each for untested; ½ doz., $3; Tested, 75c each; ½ doz., $4.25. These are choice Queens that we have been selling at 75c and $1.50 each. If you want some very choice stock, try some of these Queens. 8Atf

Fred Leininger & Son, Delphos, Ohio

Please mention Am. Bee Journal when writing.

BUY YOUR HONEY

From members of the Michigan Bee-Keepers' Association.

Send your address for free annual booklet, giving names of members, with information concerning the honey they have for sale.

Address,

E. B. TYRRELL, Sec.,

230 Woodland Ave. DETROIT, MICH.

For Sale

Fine GOLDEN ITALIAN QUEENS from good stock at 50c each. A few Dark Italian Queens—3 for $1.

J. F. MICHAEL, Rt. 1, WINCHESTER, IND.

-A3 Please mention the Am. Bee Journal.

Write Us To-Day

for our 1910 Catalog and let us tell you all about

DITTMER'S COMB FOUNDATION

and

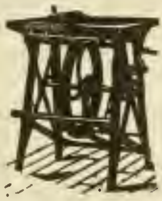
WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line** of **Supplies.** It will pay you, and costs nothing.

RETAIL and WHOLESALE.

Gus Dittmer Company, - Augusta, Wisconsin.

BARNES' Foot-Power Machinery



Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, **W. F. & JOHN BARNES,**
995 Ruby St., Rockford, Ill.

Good Queens

If you are going to want any Queens for increase, or replacing old queens next June, it is time to begin to think about it. I have been breeding leather-colored Italian queens for years, and they are giving excellent satisfaction. If you are interested, write. Good queens; no disease; prompt shipment, and absolute satisfaction guaranteed. Prices: June, one, 90c; three, $2.50; six, $4.75; doz., $9.00; 20 or more at 60c each. 2A9t

S. F. Trego, Swedona, Ills.

CRANE CELLULAR CASES

Mr. H. W. Coley, of Westport, Conn., writes us:

"I am using your Corrugated Paper Cases for shipping comb honey in, this year, and like them. On one shipment last year of six wooden cases packed in a carrier with a straw cushion, the greater part were ruined. This year the same quantity shipped to the same place in your cases went through without a broken comb."

1. The first cost of the Paper Cases is less.
2. He saved the cost of the carriers.
3. He saved the time of making the carriers.
4. He saved the weight of the carriers.
5. The Paper Cases weigh less than wooden ones.
6. They can be assembled in one-half the time it requires to set up a wooden case.

Send for our Circulars and let us tell you what some of the other large producers and dealers say.

Do not take our word for the value of this new Case.

Plan to order early. Some were disappointed last year.

J. E. Crane & Son, Middlebury, Vt.

CAPON TOOLS

CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

FOR SALE

Second-Hand Winter-Cases, complete with 7-inch covers, nailed and painted, 8 and 10 frame sizes—Root manufacture.

Have about 100 of these at 75 cts. each. Some of them have been used but one season, and all in good condition.

Also 25 Telescope Caps, nailed, at 30 cts. each; and 6 8-frame Hives. Address,

CRYSTAL APIARY,
58th & Wood Sts., CHICAGO, ILL.
Telephone, Wentworth 2446

Please mention Am. Bee Journal when writing.

Prize Takers

Pharr's Goldens took first prize at 3 exhibits in Texas in 1907. We will furnish Golden, Carniolan, Caucasian, and 3-band Italian Queens, untested, $1.00 till June 1, then 75 cents. Tested, $1.50 till June 1, then $1.00. For large quantities, write. Our 3-band Breeders from W. O. Victor and Grant Anderson strains; other races from the best obtainable. "Prompt service and satisfaction," is our motto. Address, 5Atf

NEW CENTURY QUEEN-REARING CO.
or JOHN W. PHARR,
Berclair, - - Texas

Again to the Front with The Famous Banats

Having moved my Banat Apiaries from Sabinal to San Benito, Texas, I am now better prepared to turnish High Quality

QUEENS

and guarantee them purely mated. Prices: Untested Queens each, 75c; per doz., $8.00 Tested Queens each $1.25; per doz., $12.00.

My stock is pure and free from disease—the gentlest bees on earth.

GRANT ANDERSON,
2Atf SAN BENITO, TEXAS.

NORWOOD'S Texas-Bred—QUEENS

Three-banded Queen-Bees bred for business. Try them, then you'll know. Untested, $1.00; six, $5.00. Write us.

5Atf **E. B. NORWOOD, Del Valle, Tex.**

"If goods are wanted quick, send to Pouder"
(Established 1889)

BEE-SUPPLIES

Standard hives with latest improvement; Danzenbaker Hives, Sections, Comb Foundation, Extractors, Smokers—in fact, everything used about the bees. My equipment, my stock of goods, the quality of my goods, and my shipping facilities, can not be excelled.

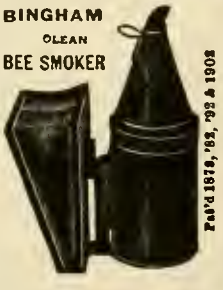
Paper Milk Bottles,

for Extracted Honey. Made of heavy paper and paraffin coated, with tight seal Every honey-producer will be interested. A descriptive circular free.

Finest **White Clover Honey** on hand at all times. I buy **Beeswax.** Catalog of supplies free.

Watter S. Pouder, Indianapolis, Ind. 859 Massachusetts Ave.

HAND-MADE SMOKERS



Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

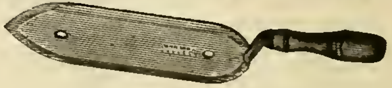
All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made.........	$1.50—4	inch stove
Doctor—cheapest made to use	1.10—3½	"
Conqueror—right for most apiaries	1.00—3	"
Large—lasts longer than any other...........	.90—2½	"
Little Wonder—as its name implies	.65—2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

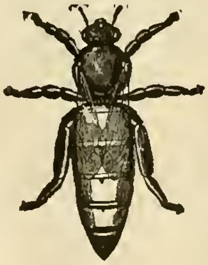
Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.

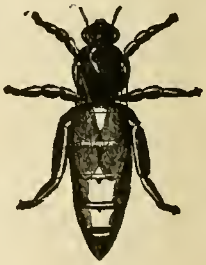


Patented, May 20, 1879. **BEST ON EARTH.**

Please mention Am. Bee Journal when writing.



DOOLITTLE'S "Scientific Queen-Rearing"



This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., Chicago, Ill.

LEWIS BEEWARE — Shipped Promptly

—SEND FOR NEW CATALOG—

Extracted Honey for Sale. (Ask for Prices.)

Beeswax Wanted. 27c Cash—30c Trade.

ARND HONEY & BEE-SUPPLY CO. NOT INC.
(Successors to the York Honey & Bee-Supply Co.) **H. M. ARND, Proprietor.**
148 West Superior St., CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

Honey and Beeswax

CHICAGO, Aug. 26.—There is a good demand for honey of all kinds. Fancy comb has sold readily at 17c, and No. 1 to A No. 1 at 15@16c The amber grades bring from 1@3c less. The best grades of extracted bring 8c, with a fancy article selling at 9c. The amber grades, 7@7½c. Beeswax, 30@32c, according to color and freedom from residue.

R. A. BURNETT & CO.

INDIANAPOLIS, Aug. 26.—The new crop is now moving, and demand seems to be exceptionally good for this season of year. Jobbers are offering fancy white comb at 18c; No. 1 white, 17c. Finest extracted at 10c, with some slight reductions on large quantities. It is presumed that producers are being paid about 2c less than above quotations. This is not a desirable market for amber honey. Producers of beeswax are being paid 28c cash, or 30c in trade.

WALTER S. POUDER.

KANSAS CITY, MO., Aug. 26.—The receipts of comb and extracted honey are still light, but the demand is good. We quote: No. 1 white comb, 24 sections, per case, $3.50; No. 2 white, $3.00@$3.25; No. 1 amber, $3.00@$3.25; No. 2 amber, $2.50@$2.75. Extracted, white, per lb., 7½c. Beeswax, 25@28c.

C. C. CLEMONS PRODUCE CO.

ZANESVILLE, OHIO, Aug. 26.—There is good demand for honey, especially comb, but the market is bare, and offerings very light. There seems to be a disposition on the part of some producers to hold back their crop and "bull" the market. This is not always good policy, and there may be a crash later. The present tendency is to inflate the prices to an extent that will react and cut off the demand; for there is a limit to what consumers will pay. For Northern white comb, grading No. 1 to fancy, producers should receive, first hand, 14½@16c; and for best white extracted in 60-lb. cans, 8@8½c, delivered. The wholesale market is necessarily unsettled Producers are offered for good-grade beeswax 28c cash, or 30c in trade. Wholesale quotations are from 33c up, according to quantity.

EDMUND W. PEIRCE.

BOSTON, Aug. 26.—Fancy white comb honey at 16@17c; No. 1, 11@15c. Fancy white extracted, 9@10c. Beeswax, 32c.

BLAKE,-LEE CO.

CINCINNATI, Aug. 27.—The market on comb honey is very firm, prices ranging in a wholesale way in 50 and 100 case lots, fancy 16c. No. 1 at 15c. Off grades are not wanted at any price. Amber in barrels is selling at 6½@7c, according to quality. White clover extracted at 9@9½c; white sage, 9½c; California light amber, 8½c. Beeswax is in fair demand at $32 per 100 lbs. These are our selling prices, not what we are paying, therefore govern yourselves accordingly on these prices.

C. H. W. WEBER & CO.

NEW YORK, Aug. 27.—New crop of comb honey from New York State and near by is beginning to arrive in small lots, and strictly fancy sells at 16c; No. 1, 14@15c; lower grades, 13c. There is a good demand which, no doubt, will continue during the fall. However, we would suggest that producers send their honey to market as soon as they have it ready, and not hold too long for higher prices. Extracted honey is in good demand in all grades, and prices show an upward tendency. Francy is selling at 9@9½c; white, 8@8½c; light amber, 7½c; and Southern, in barrels, all the way from 68@80c a gallon, according to quality. Beeswax steady at 30c.

HILDRETH & SEGELKEN.

FENCE *Strongest Made*
Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 37 heights of farm and poultry fence. Catalog Free.
COILED SPRING FENCE CO.
Box 89 Winchester, Indiana.

FALCON FOUNDATION

Years of experience in the manufacture of
FALCON COMB FOUNDATION
have made it PERFECT.
Bees like it, and the foremost
Honey-Producers Use It.
It helps materially to increase the
Honey Crop
(Send for our new Catalog.)

Ship us your
BEESWAX
to FALCONER, N. Y.
Will send shipping-tags, when you write asking for quotations.
We pay highest market prices.
W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

SUPERIOR BEE-SUPPLIES
Specially made for Western bee-keepers by G. B. Lewis Co. Sold by
Colorado Honey-Producers' Association,
DENVER, COLO.

Please mention Am. Bee Journal when writing.

HONEY WANTED

When you have any to offer, let US hear from you.
If it is Comb Honey, state how it is put up, and the grade ;
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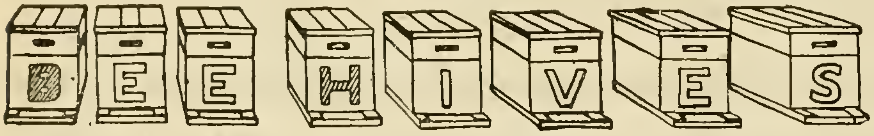

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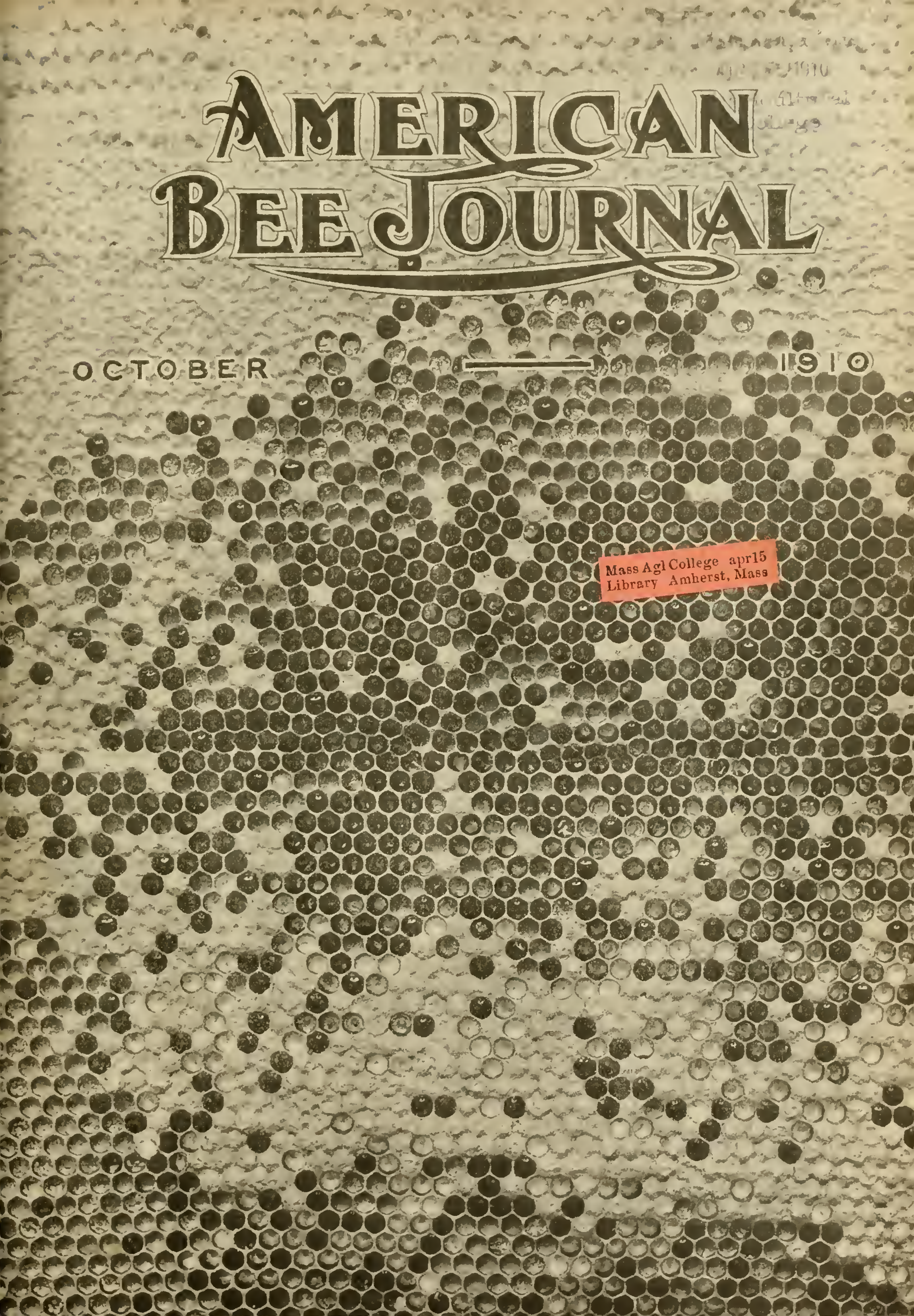
AMERICAN BEE JOURNAL

OCTOBER 1910



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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY
GEORGE W. YORK & COMPANY
146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

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2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

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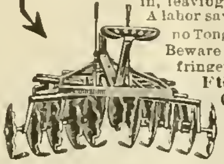

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AMERICAN
BEE JOURNAL
L. L. LANGSTROTH
DADANT

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

Published Monthly at $1.00 a Year, by George W. York & Company, 146 West Superior Street,

GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., OCTOBER, 1910

Vol. L---No. 10

Editorial Notes and Comments

Prevention of Honey Granulation

Some producers and dealers have so educated their clientele that granulated honey is preferred to the liquid. But in most cases there is a very decided preference for the liquid, and in lack of any way to prevent granulation many bee-keepers take back from the grocers bottles of honey that have become granulated, and liquefy by heating. And to do that satisfactorily is something of a trick, to say nothing of the time and trouble. Now comes the Canadian Bee Journal, and says:

> "A tablespoonful of glycerine to one gallon of honey will prevent it from granulating! Stir it a little and it will be found perfectly soluble......We have this on the authority of a first-class chemist, who has sold honey in his drug-store, and has by this means kept it in liquid form for ready sale."

Looks as if it might be all right. No doubt the question will be raised whether there is danger of conflict with the pure-food law. None whatever so long as there is no deception on the label, which should tell exactly what is under the label.

Foul-Brood Legislation

It has sometimes been argued that the work of foul-brood inspectors has been a failure, since foul brood still continues where they have operated. Well, suppose it does. Suppose in the district covered by a certain inspector the disease is not only unconquered, but that it is twice as bad as it was when he began fighting it. That by no means proves that his efforts have been fruitless. For if it had been allowed to run unhindered it might by now have been four times as bad.

To this it might be replied, "If, in spite of the inspector's work the disease is twice as bad each year as it was the previous year, how many years, at that rate, will it take to clean it out?" Of course, there is only one answer to that: The disease will never be overcome.

But why not increase the effort? With a double force on the same ground, or a greater force, if necessary, there is every reason to believe that the scourge may be held at bay, if not entirely wiped out.

Some better argument against foul-brood legislation must be advanced, if it is to appeal to intelligent bee-keepers.

Clipping the Queen's Wing

Each year there seem to be more bee-keepers who advocate and practice clipping queens. The great argument in its favor is that a clipped queen can not go off with a swarm. For most bee-keepers that alone is a sufficient advantage to pay for clipping, ten times over. There is another advantage that some might not think worth considering, while others lay great stress upon it. It is that clipping shows at a glance whether there has been a change of queens. In a certain hive is a queen—at least was a queen—known to have been clipped in a certain year. If, upon looking into the hive, the owner finds a queen with whole wings, he knows at a glance that there has been a change, and that a young queen has taken the place of the old one.

Honey-Dew—Secretion or Excretion

D. M. Macdonald said honey-dew, instead of being excreted by the plant-lice, is a secretion. Then some of the scientists said he was mistaken. But, Scotchman that he is, Mr. Macdonald does not easily yield his ground. In the British Bee Journal he quotes no less authorities than T. W. Cowan and M. Gaston-Bonnier. Mr. Cowan says:

> "Although perfectly aware that opinions are divided on the subject, we believe with those who think it generally to be an exudation from the pores of leaves under certain atmospheric conditions, although it may sometimes be produced by aphides. At Howald, in Alsace, we watched bees collecting honey-dew, but found hardly any insects. This year we have seen lime-trees from which the sweet liquid was falling in drops, and yet very few insects were found. We have specimens of excellent flavor quite free from any admixture of fæcal matter."

M. Gaston-Bonnier says this on the subject:

> "The presence of plant-lice on trees has no connection with this nectar [miellee]. The excremental liquid of aphides is not equally sweet in all the species, and the bees harvest only that which is very sweet. They generally prefer the true honey-dew which *exudes from the leaves* at certain times, and contains mannite and saccharine matter.
>
> "The true miellee of trees may fall in small drops, and some observers conclude from this fact that it is produced by aphides. I have, however, often seen some trees, and even all the trees of a wood, covered with an abundant miellee falling in small drops, although there was not a single louse on the higher limbs. We must not confound the true miellee produced on the surface of leaves without the action of aphides, and the excretion, more or less sweet, containing very little sugar, produced by plant-lice."

Bee-House Wagons

In Germany considerable use is made of wagons for migratory bee-keeping; not merely wagons to haul the bees from one place to another, but wagons constructed so as to have the hives remain in them permanently. One would suppose this a rather expensive way of doing, but the Germans are not a people to lose sight of the matter of economy. S. Husser says in Praktischer Wegweiser that he has made 30 of these wagons, and has 4 of them in use for himself. As he makes them, each wagon has 28 hives built in the wagon, with opportunity for 6 more when the wagon is in place, making 34 in all.

If such a thing is profitable in Germany, is there no place in this country where it might be equally profitable?

Natural or Artificial Increase

Whether it is better for a beginner to depend upon natural swarming for increase or resort to artificial increase is not a matter so easily settled. There is something to be said on both sides. On the whole, perhaps natural swarming gives less trouble. One can get along with it with no other trouble than to hive each swarm when it issues, leaving to the bees to decide how much swarming they shall do. Then as to the young queens reared. With all the effort at improvement that has been made in rearing queens by other means, no one claims that a better queen can be reared than the same colony with the same materials will rear in connection with natural swarming. The most that can be claimed is that it is "just as good," and it *may* be a good deal poorer.

But natural swarming has its drawbacks. Bees may swarm at inconvenient times. They may not swarm as much as desired, and they may swarm more than desired. A very serious objection is that the best colonies are generally least inclined to swarm, and most of the increase will be from the poorer colonies, thus tending constantly to deterioration, commonly expressed by saying, "The bees have run out."

All things considered, the bee-keeper who is too negligent to give his bees proper attention may do well to allow natural swarming; if he means to be an up-to-date bee-keeper, he will take the matter of increase into his own hands.

Extracted vs. Comb-Honey Production

"There is plenty of evidence," says Gleanings, "going to show a tendency on the part of comb-honey producers to go into the business of producing extracted." It reasons that the effect of the pure-food laws has been to give the public more confidence in extracted honey, thereby increasing the demand for it and increasing its price, while the price of comb honey has remained stationary. The greater difficulty in contending with swarming in the production of comb honey is also credited with its influence in helping to give the production of extracted honey the preference.

Taking the broad view of "the greatest good to the greatest number," one can but rejoice at this tendency. At the present time, according to Government reports, the average annual consumption of sugar in the United States is 82 pounds for every man, woman and child. Physicians tell us this is more than is good for the digestive organs. But if this average is bad, what is to be said of those who go beyond the average? It is reasonable to believe that some consume twice as much sugar as others, and if the consumption of 82 pounds is bad, the consumption of more than 82 pounds must be very bad. As honey does not make the same demand upon the digestive organs as sugar, but is directly assimilated without change, every pound of sugar that is displaced by a pound of honey means just so much toward the health and strength of the nation.

Anything, then, that increases the consumption of honey is a public benefit. If the public be convinced that extracted honey is just as really honey as that in the comb, there can be little question that much more extracted than comb will be consumed, so long as there is a difference of several cents a pound between the two. In the homes of the wealthy few, the price makes little difference. In the homes of the few very poor it may make little difference; there either is barred out as an unattainable luxury. But leaving out these two classes, in the great majority of homes we may find at least some honey eaten in the course of the year, either as something for occasional indulgence or as a profitable article for daily consumption. Many a man who would consider a section of honey at 25 cents as something to be indulged in as an occasional luxury, would snap it up as a bargain if he should see it offered at 15 cents. Indeed, it is a very safe guess to say that if honey were offered only in the comb, there would be five times as much of it used in the average home at 15 cents as there would be if it could be had only at 25 cents. Now suppose it comes to be the general belief that extracted honey is just as genuine as the comb, why should not as much extracted be used at 15 cents as would be used of comb at the same price?

Let us rejoice, therefore, in the turning from the production of comb honey to that of extracted, because that means on the whole the production of just so much more honey, and that means its greater consumption, and that means a gain in the health and strength of the nation.

Why Bees Fear Smoke

P. Neumann quotes in Leipz. Bztg. an editorial upon this subject, and suggests that the effect of the smoke on the breathing organs of the bees is enough to make them want to get out of the way. A good suggestion.

Foul Brood in New Zealand

Largely by the efforts of I. Hopkins, late Chief Government Apiarist of New Zealand, a foul-brood law was passed in that land, one provision of which made it obligatory to have all bees in movable-frame hives. As to the effect of the law, Mr. Hopkins reports in the British Bee Journal:

> Some districts that were absolutely rotten with foul brood less than 3 years ago are now clean; box-hives, together with the careless bee-keepers, are fast disappearing; the industry is expanding at an enormous rate, and satisfaction is expressed generally. We have practically had no bother or trouble in carrying out the provisions of the Act, although in some districts we have been compelled to burn 25 percent of the bees and hives. No compensation is allowed, and rightly so, I think; for why should a person be compensated for being compelled to give up being a nuisance and a danger to his neighbor? It is estimated that the output of honey and beeswax has more than doubled in 4 years.

When the Basswood Fails

Not when it fails to bloom, but when it fails to be sufficiently plenty to be used as lumber from which to make sections. Now and again something is said about the great danger that basswood will become so scarce that it will no longer be possible to use it for making sections. It is used for so many different purposes for which it is especially adapted that we are told that there is danger that in the not very distant future basswood honey may become a thing of the past. For honey-producers in the basswood regions that will be a calamity. But that does not apply to all producers of honey, nor even to all producers of comb honey. Thousands of bee-keepers have not a basswood tree within range of their bees. So far as the yield of honey is concerned, they will not suffer if basswood be suddenly cut off from the face of the earth. Indeed, they will be the gainers, for they will no longer have basswood honey to compete with.

But when it comes to the matter of using basswood lumber for making sections, that touches all producers of section honey. No, not all, but probably nearly all. We are told that basswood lumber has already greatly advanced in price; and that we may expect that it will not be long until the price again doubles, and doubling the present price of sections will make them so expensive that it will be prohibitory, and that sooner or later—perhaps very soon—producers of section honey must consider what they will do when they will no longer have any sections; whether they shall turn their attention to producing bulk-comb honey or extracted.

In all this talk there is a good bit of foolishness, notwithstanding the indisputable fact that there is a growing scarcity of basswood lumber. It may be worth while to look matters over, and see if the fears of the producer of section honey may not be so far allayed that he need not feel that he will be compelled to turn to some other line of production than section honey.

First, does doubling the price of basswood lumber double the cost of sections? How much lumber is used in a section? Take the section most in use, the 4¼x4¼x1⅞ bee-way, which takes more lumber than the plain section of the same capacity. In the flat it measures about 17x1⅞x⅛, which amounts to nearly 4 cubic inches of lumber. Allow abundant amount for waste, and take 8 cubic inches for each section, and we find that for 1000 sections it will take 55.5 feet of lumber, board measure. That means an advance of $18 a thousand on basswood lumber for every dollar advance on 1000 sections. If sections are now rated at $5 a thousand, before they double in price lumber must be $90 per thousand feet higher than it now is. That will be a good deal more than double the present price of lumber, for it must be remembered that the price of $5 a thousand for sections includes not only the cost of the lumber, but also the cost of manufacturing, and the cost of manufacturing does not double with the doubling of the price of lumber, but remains about the same without regard to cost of lumber.

We hardly need worry about basswood lumber advancing $90 a thousand right away. Even if it should, that would mean an advance of only ½ cent a pound on honey, and an increase to that extent is not likely to throw section honey out of business.

Even if all the basswood lumber in the world should be wiped out of existence, that does not by any means mean that no more section honey would be produced. It only means that we should go back to the same kind of sections we first used—the 4-piece. Even at present there are those who think 4-piece sections are preferable. For one-piece sections there is probably no timber to compare with basswood; but for 4-piece there is plenty of timber just as good as basswood, or better, and at a less price. So the talk about giving up section honey because of the advance in basswood lumber is all idle talk.

McEvoy's Artificial-Increase Plan

In the Canadian Bee Journal is given a plan of increase practiced by Wm. McEvoy, that may be used by any one who produces extracted honey. Here is the plan:

> In making artificial swarms I collect 8 of the best combs of brood from the supers and a comb that has been 3 days in my best colony, and after I put the comb of *hatching eggs* in the center of these 8 combs of *hatching brood*, I go to my strongest colony and lift it off its stand and then place the hive of super brood and comb of hatching eggs on the stand where the strong colony of bees stood. I then shake about a quart of bees in front of this hive of brood, being careful not to shake the queen off. I then move the hive of bees and queen to a new stand. The *field*-bees will return to the old stand where the 8 combs full of hatching brood and one comb of hatching eggs are.
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> This makes one of the most powerful nuclei ever made, and the bees having only one comb of larvæ to be fed, will feed it the best that it has ever been fed; and thus with hundreds of bees hatching every hour, puts this colony in the very best condition to put *abundance of royal jelly in every queen-cell, thus producing the best queens.* I put frames of *hatching* brood taken from supers on this one rearing the queens, and also frames of brood on the old colony that I moved away.

Clipping One or Two Wings of Queen

A queen having all 4 wings cut close can, of course, make no headway at flying. Without thinking, one might suppose that if both wings were left whole on one side, the queen could make more progress at getting away from the hive (in case of swarming) than she could with all 4 clipped. In either case she can not fly. She can run and jump, and the wings on one side will only hinder her at this, for they will throw her over to one side, thus hindering her progress. If half or more of the two wings on one side are taken off, a queen will never fly again.

Clipping one of the 4 wings is really all that is necessary to prevent flight, but there is reason why it is better to clip both wings on one side, namely, that when the bee-keeper is looking to see whether the queen in a hive is clipped, he may get just a glimpse of her as she passes quickly under a comb, and if both wings are clipped it is easy to recognize it, whereas if only one wing is clipped it is not easy with such a fleeting glance to say whether she is clipped at all.

Some Remarks About the Drone

Not long ago a member of the Journal family wrote that much had been said about the queen and workers, and he thought it was time that a little attention should be paid to the drone. It can hardly be said that no attention is paid to the drone, even though the attention he gets is mostly of a destructive kind. Constantly the advice is given and repeated, to suppress the drones as much as possible, so as not to have on hand a lot of useless consumers. Trapping, slicing off the heads of the sealed brood, and cutting out all drone-comb are advised.

But in perhaps the majority of cases no attention is paid to the advice, so in that respect it may be said that the drone is neglected. In some apiaries, especially where full sheets of foundation are not used in brood-frames, it would be nothing strange to find as much as a full frame of drone-comb in each hive. The owners of these colonies probably do not realize what a loss this means. In the first place there is the cost of rearing. In place of the frame of drone-brood, there might be a frame of honey or a frame of worker-brood. Then there is the cost of maintenance. It would be a different matter if the drone would go out into the field and rustle for his living. But he doesn't do that. When he leaves the hive it is only for exercise that he may increase his appetite to eat more when he returns. Neither is he satisfied to help himself after the table is set. His overworked sisters must chew, swallow, and digest his food for him before it is ready for his dainty palate. All this is very expensive business; so expensive that if it were fully realized there are hundreds or thousands of bee-keepers that would at once put in some time that might easily pay them a dollar an hour in cutting out drone-comb and fitting in its place worker-comb.

On the other hand, what can be said in defense of supporting a horde of these "lazy fathers of the hive?" One defense has been offered: they are of use in keeping up the heat of the hive. When a swarm issues, and the mother colony is left so weak that there are hardly enough bees to keep the brood warm, if the drones that are present were to be taken away nearly all the brood would perish. Again, when nectar is so plentiful that, as the Germans say, "every fence-post yields honey," the drones remain at home to keep the brood warm, releasing the same number, or a greater number, of workers to go afield to add to the harvest. This defense has been seriously set forth and ardently defended, although perhaps not in this country. It hardly needs to be mentioned that a pound of workers can do as much at keeping the hive warm as a pound of drones, and be doing some other useful work the while.

After all this is said, there remains the fact that the drone is a very important personage in the bee-community, and that if *all* drones were suppressed bee-keeping would cease to be. And while it is true that effort should constantly be made to avoid the support of a needless number, it is also true that equal effort, perhaps greater effort, should be made to have only the best drones preserved. While too few bee-keepers pay any attention to the stock from which their young queens are reared, still few pay the least attention to the drones. Of those who are faithful in trying to keep down an over-supply of drones, the strong probability is that no distinction is made, and that the drones of the best colonies are suppressed just as much as the drones of the poorest.

Possibly some may say that only color and temperament, or some other particular traits are inherited from the father, and the most desirable traits for good storers are inherited from the mother. Stop and think a minute whether in the human family certain traits are always inherited from the father and others exclusively from the mother. If the father has very dark hair and the mother very light, will the hair of all the children resemble that of one parent alone? May not industry be inherited from the drone as well as the queen?

It may be thought that so long as the bee-keeper has no control over the mating of the queen, and that she may meet a drone from some other apiary, it is hardly worth while to pay any attention to the drones beyond keeping down their number. But in any apiary of 100 colonies, if drones are encouraged in the best colonies and suppressed in others, so that the majority of the drones are of best stock, certainly the chances for meeting the best drones is greater than if no such discrimination were made. And even if some of the young queens meet drones from other apiaries, it is worth while to give the other young queens the best chance. Then, too, the surrounding bees will in time be affected, making their drones better.

On the whole our correspondent does well to think that something is needed to be said about the drone. Much more is there a need that something be *done* where now nothing is done, both as to suppressing undesirable drones, and also as to encouraging those that are desirable.

"The Honey-Money Stories"

This is a 64-page and cover booklet, 5¾ by 8½ inches in size, and printed on enameled paper. It contains a variety of short, bright stories, mixed with facts and interesting items about honey and its use. It has 31 half-tone pictures, mostly of apiaries or apiarian scenes; also 3 bee-songs, namely: "The Hum of the Bees in the Apple-Tree Bloom," and "Buckwheat Cakes and Honey," and "The Bee-Keeper's Lullaby." It ought to be in the hands of every one not familiar with the food-value of honey. Its object is to create a larger demand for honey. It is sent postpaid for 25 cents, but we will mail a single copy as a sample for 15 cents, 5 copies for 60 cents, or 10 copies by express for $1.00. A copy with the American Bee Journal one year—both for $1.10. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

"The Amateur Bee-Keeper"

This is a booklet of 86 pages, written by Mr. J. W. Rouse, of Missouri. It is mainly for beginners—amateur bee-keepers—as its name indicates. It is a valuable little work, revised this year, and contains the methods of a practical, up-to-date bee-keeper of many years' experience. It is fully illustrated. Price, postpaid, 25 cents; or with the American Bee Journal one year—both for $1.10. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

Miscellaneous News-Items

That Special Car for Albany

While at this writing (Sept. 15) it is a little too early to announce a full carload of bee-keepers to start from Chicago at 10:30 a.m., Oct. 11th, for the Albany convention, Oct. 12th and 13th, yet there have been enough already, who have said they intended to go in the special car, to insure the car. We hope that all who can possibly join it will let us know not later than Oct. 8th, so that we can reserve berths for them, and make all necessary arrangements.

We very much regret to state that through a misunderstanding and misinformation the rates quoted in the last issues will not apply, being discontinued after Sept. 30th. The rate, therefore, will be that authorized by the Trunk Line and Central Passenger Associations, namely, *one fare and three-fifths* on the certificate plan from Chicago (do not fail to ask for certificate when purchasing ticket for going journey), which means $18.15 going, and $10.90 returning; selling dates Oct. 8 to 11, inclusive, and final limit Oct. 17.

When buying your ticket, be sure to see that it reads over the Lake Shore and Michigan Southern and New York Central Railways from Chicago to Albany. **(See page 326, on rates.)**

It has been wisely suggested that we give the time of arrival of the special car at some of the important cities along the way, as follows:

Leave Chicago 10:30 a.m., Oct. 11th. In Indiana—La Porte, 12:06 p.m.; South Bend, 12:47 p.m.; Elkhart, 1:20 p.m. In Ohio—Toledo, 4:37 p.m.; Cleveland, 7:30 p.m.; Erie, Pa., 10:05 p.m. In New York—Buffalo, 12:25 a.m.; Rochester, 3:30 a.m.; Syracuse, 5:30 a.m.; Utica, 6:55 a.m. Arrive at Albany, 9:20 a.m., Oct. 12.

The sleeping-car berth from Chicago to Albany will be $4.50, or $2.25 each when two occupy the same berth.

The convention will be held in the City Hall at Albany, beginning at 10:30 a.m., Oct. 12th, and concluding with the afternoon session of the following day. This will make 5 sessions in all, one session being at night.

The indications are that the attendance will be very good, and the meeting one well worth attending. Of course, the railroad trip and meeting of old and new friends will be a very enjoyable feature of the convention.

The Hotel Kenmore, one block from the Union Depot, has been selected as headquarters. The rate is $1.50 per day and upward, but when four bee-keepers occupy one room the rate will be $1.25 each. The Kenmore is one of the best hotels in Albany, and it would be very nice if as many as possible who attend the convention will stop there, so that the time between the sessions of the convention may be spent most enjoyably in meeting and conversing with others attending the convention.

As we have announced before, we are ready to make reservations in the special car for all who will notify us that they can go. You can address this office, or G. K. Thompson, General Agent of the Lake Shore and Michigan Southern Railway, 180 S. Clark St., Chicago, Ill., for any additional information you may wish to have about the special car.

Switzerland's Wealth in Honey

Switzerland is a land of flowers, and its thrifty inhabitants have made the blossoms very largely contributory to the food supply. According to statistics gathered by the Swiss Society of Agriculturists, "There are 250,000 colonies of bees in the country, each of which produces 40 pounds of honey during the season, a total of 10,000,000 pounds a year. The average price of Swiss honey for the year 1909 was 25 cents a pound, giving the year's product a total value of $2,500,000." As the flowers grow without cultivation, and the bees work without other wage than caretaking, producing their own food-supply, the honey crop is in great part clear profit. The Swiss honey is of very delicate flavor and fine quality.—*Philadelphia Record.*

The foregoing item is clipped from a leading Chicago daily, which, as it appears, had copied it from another paper, and just where it started it may not be easy to know. It shows that besides being the foremost bee-keepers in the world, the Swiss brethren know something about the fine art of advertising. Here is an item that seems to be going the rounds of the papers in a strange land as something of general interest, and a very little change in it would make it apply to this country, said change making it all the more interesting. This is a land of flowers as well as Switzerland, and the value of its honey is a good deal more than $2,500,000. Why is it that bee-keepers of this land can not unitedly enter upon a campaign of advertising that would make hundred-fold returns?

A Rough-and-Ready Hive Level

When the suitable tool is not at hand a most efficient substitute will be found in a common soup-plate. Lay it on the floor-board and fill up with water. If inclined to one side, prise up the stand until you judge the water stands level with the rim all around, and there you are!—D. M. MACDONALD, in the *British Bee Journal.*

A California Visitor

September 14th there dropped in to see us one of the big (225 pounds) specimens of California bee-keepers. Just now, however, he has no bees, but is manager of the Madary's Supply House at Los Angeles. This concern manufactures doors, windows, and bee-keepers' supplies, and has built up a large trade in California and the surrounding territory.

Mr. C. reports that Southern California has practically no honey crop this year, and many bee-keepers are feeding their bees, which surely is very discouraging for all concerned. So California honey will not compete very much with the honey produced in other parts of the country this year.

Mr. Clayton is a great lover of Southern California. He has been in that State since 1874, and, although having been in the East only about two weeks, he said he would be mighty glad to get his feet back on Los Angeles County soil once more! It is strange what a fascination California people seem to have for that State. And they all want everybody else to come out there and help them enjoy both climate and country.

Mr. C. is one of the substantial business men of Los Angeles, being prominent not only in the line of his own business, but is public spirited in many ways. While only 60 years of age, he does not look over 50, and enjoys the distinction of having children and grand-children galore. ("Galore" means in that place 6 children and 8 or 9 grand-children, all living in Los Angeles. No race suicide in his family!)

Mr. Clayton was spending a few weeks in the Central East, and expected to return to his home the last of the month.

The Excessive Use of Sugar

The following clipping from the San Diego (Cal.) Sun, of Aug. 11, 1910, has been received:

> Now comes a high medical authority who declares that through the use of sugar the human race is degenerating. This assertion was made by Dr. Robt. Roessler, of Hoboken, who, in speaking before the New Jersey State Dental convention, claimed that sugar commonly used in all families is nothing else but concentrated and crystallized acid, which is exceedingly dangerous to the human system. In former years sugar was a luxury, and only the wealthy could afford it. Today everybody uses it, and many of the new diseases, says Dr. Roessler, are caused by the modern method of manufacturing sugar.
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> The loss of energy, Dr. Roessler declared, through the consumption of sugar in the last century, can never be made good. Alcohol has been consumed for thousands of years, but has not caused the degeneration of the human race that sugar is causing.

Without raising the question as to whether the picture has been at all overdrawn by Dr. Roessler, there can be no question that it is well that a note of warning should be sounded. A few years ago the consumption of sugar in this country was 60 pounds annually for every man, woman and child. Now it is 82 pounds!

That is no doubt more than the digestive organs can safely care for, and it is well the public should know it. But what a fine thing it would be if medical auhorities, while calling attention to the harm done, would add that the harm would mostly disappear if honey were substituted for sugar. People will have sweets, and why not have the most wholesome of all sweets?

A B C and X Y Z of Bee Culture

A copy of the 1910 edition of this wonderful bee-book is on our desk. It completes the 131st thousand copies. Just think of it—131,000 copies of a single bee-book printed and circulated within only about 30 years! This last edition of "A B C and X Y Z of Bee Culture" is the most complete of all. The whole book is kept standing in type so that each succeeding edition may be more easily revised and brought up to date. Where it is possible to use a picture to make the text more clear, a picture has been used. The whole has been gotten up in cyclopedic form, so that every topic is readily referred to. Every subject on which there has been new light discovered since the preceding edition, has been re-written, and the new information incorporated in the proper place.

This new copy contains an appendix on the "Anatomy of the Honey-Bee," by R. E. Snodgrass, of the Bureau of Entomology, Washington, D. C. Mr. Snodgrass is the author of a Government Bulletin on the same subject, covering about 150 pages, which also is profusely illustrated with many new and original engravings illustrating the anatomy of the honey-bee. This pamphlet can be secured from the Department of Agriculture for 20 cents. But Mr. Snodgrass has given sufficient on the subject in 11 pages of "A B C and X Y Z of Bee Culture" to satisfy almost any bee-keeper who is not a scientist or specially interested in the anatomy of the bee.

What more can we say of this standard bee-book? It's nearly 600 pages, 6½x9 inches in size, contain practically everything on successful bee-keeping that can be put on the printed page. And all this is furnished bound in cloth for $1.50, postpaid, or we mail the book with the American Bee Journal one year—both for $2.25.

It is almost needless to say here that every bee-keeper in the world who desires to have the latest book-information concerning bees and bee-keeping should have a copy of this great work. Send in your order to the office of the American Bee Journal, when it will have our prompt attention.

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Sweet Clover in Pennsylvania

The following is taken from the Rural New-Yorker, one of the oldest as well as one of the very best farm papers published. Some of these days all farmers, as well as bee-keepers, will come to appreciate the truly great value of sweet clover for many purposes besides that of being a honey-plant. Here is the item:

Yellow Sweet Clover.

During the month of June, 1906, I purchased 10 pounds of white sweet clover (Melilotus alba) seed and sowed a patch of about an acre, which was infested with Canada thistles; however, it happened a drouth followed the sowing, hence there was a very thin stand. The seed was simply sprinkled over the sod and thistles, and no cultivating previously. The next year it was mown for hay just before it was in bloom, and the few years following, it was allowed to stand and re-seed itself until now, 1910, it is a thick mass, almost impenetrable, and the average height is 5 feet 6 inches to 7 feet. And the marvelous thing about it is, the clover grew so fast and so thickly that the Canada thistles were choked, and at present there are very few to be seen except along the edges of the patch. As sweet clover belongs to the legume family, it has gathered nitrogen from the air and stored it in the numerous nodules, borne on the roots, to be used as an enricher of the soil.

White Sweet Clover.

To sum up, I have killed two birds with one stone, viz., choked out the thistles and at the same time enriched the land, and last, but not least, it has furnished pasture for the bees while in bloom. In raising sweet clover as a forage crop and for hay, prepare the ground as for alfalfa and sow in August quite thickly, possibly about 25 pounds to the acre. If a good stand is secured the next spring the plants will stool, and if it stands thick as it should for hay the stems will not be coarse, and the cattle and horses will eat it up clean. However, at first the horses and cows refuse it, but soon get used to it, and afterwards eat it greedily. It should be mowed for hay just before it blooms, as the stalk gets too woody and cattle will not eat it. It is a great plant for green manuring, and when turned under produces great crops of potatoes and corn. As a weed I do not think it is any worse than the other clovers, for it can easily be got rid of by plowing under or cutting the stalk while in bloom.

Sweet clover compared with alfalfa or other clover, I think, stands second to alfalfa and above the other clovers entirely. If mown for hay before the blossoms open, it will sprout, and stock can be pastured until fall. As a weed eradicator, soil enricher, honey-plant, and forage-plant, I think it has very few equals when rightly handled. Almost any soil will grow sweet clover, the hardest clay and the most barren looking soil may grow it, and drouth will seldom affect it. I think if the farmers learn to know the value of sweet clover they will no longer regard it as a weed; and another thing, sweet clover might just as well be grown in waste places and along fence rows as weeds, as it is very valuable for the bees for the honey it yields, so bee-keepers take notice.

In this article I have given my experience with sweet clover; it came to me as a new plant, and I have tried to find the bad qualities as well as the good, but they are all good, in my estimation. E. S. Hacker.

Lancaster Co., Pa.

Program for the Albany Convention

While we published the program for the 41st annual convention of the National Bee-Keepers' Association to be held in Albany, N. Y., Oct. 12, and 13, 1910, we give it again herewith, so that it may be convenient for all who wish to take this number of the Bee Journal with them to the meeting, although we expect to have copies of it there for all who may desire it.

The program has a great variety of topics to be considered, and, of course, the question-box will introduce many other important topics for discussion. If any member has a question he would like to have presented, he can mail it either to the President, Secretary Scholl, or General-Manager France, in care of the Kenmore Hotel, Albany, N. Y., unless there is time for such questions to reach the persons mentioned before they start for Albany.

Also, if any have suggestions to make that they think would be for the improvement of the National Association, it would be a good thing to send them on, so they may be discussed at the meeting. While, no doubt, all suggestions could not be utilized in the interest of the Association, still it might be just the thing to help make the National of more value to its members and to bee-keeping in general throughout the country.

The Michigan Association is planning to do great things these days for its members, and there is no reason why the National Association should not do a similar work for the bee-keepers of the whole country in many ways. These matters need to be considered very carefully, so that the National may be put in a position where it can do more for its members. There ought to be wisdom enough among the whole membership to devise ways and means that will insure the Association being a greater help in the future than it has been in the past, although its record so far is nothing to be ashamed of.

It may be that some who attend the convention will be able to bring something for exhibition. Vice-President Wright expects to have a small room adjoining the convention hall where everything of an exhibition nature can be placed for inspection by those attending the meeting. Bee-keepers are always looking for something new, so if you have anything that shows progress be sure to take it with you.

The program referred to above, and which we published last month, follows:

PROGRAM OF THE NATIONAL BEE-KEEPERS' CONVENTION AT ALBANY, N. Y.

The National Bee-Keepers' Association will hold its annual convention Oct. 12 and 13, 1910, in the Common Council Chamber in the City Hall of Albany, N. Y.

There will be 5 sessions, beginning with the first on Oct. 12th, at 10:30 a.m., with an afternoon and an evening session the same day, and a morning and an afternoon session on the second day.

The papers selected are to take up not more than 5 minutes each, so that there will be sufficient time for the discussions of the subjects; and also allowing ample time for the "Question-Box," which is to be taken up at the conclusion of the subjects on the regular program at each session.

OCTOBER 12TH—MORNING SESSION, 10:30 A.M.

The first session will open with the reception of members, paying of dues, and such other matters, so these will not interfere after the regular program is taken up.

"Bee-Keeping as a Business"—W. B. Cavanagh, Hebron, Ind.

"What a Woman Can Do With Bees"—Mrs. S. Wilbur Frey, Sand Lake, Mich.

OCTOBER 12TH—AFTERNOON SESSION, 2 P.M.

"Comb Honey—from Nectar to Market"—S. D. House, Camillus, N. Y.

"Extracted Honey—from Nectar to Market"—J. L. Byer, Mt. Joy, Ont., Can.

"Bulk-Comb Honey and Its Future"—Louis H. Scholl, New Braunfels, Tex.

"Ripening Honey on the Hives"—W. P. Southworth, Salix, Iowa.

OCTOBER 12TH—EVENING SESSION, 8 P.M.

"President's Address"—George W. York, Chicago, Ill.

"Selection in Breeding to Increase the Honey Crop"—Geo. B. Howe, Black River, N. Y.

"Co-operation Among Bee-Keepers—Advantages and Procedure"—Frank Rauchfuss, Denver, Colo.

OCTOBER 13TH—MORNING SESSION, 9 A.M.

"Advertising to Create a Larger Demand for Honey"—F. J. Root, Newark, N. J.

"Methods of Retailing Honey"—Wesley Foster, Boulder, Colo.

"Shipping and Grading Honey"—H. H. Root, Medina, Ohio.

"Methods of Rendering Beeswax"—H. R. Boardman, Collins, Ohio.

OCTOBER 13TH—AFTERNOON SESSION, 2 P.M.

"When and How to Requeen with a Fall Honey-Flow"—F. A. Cyrenius, Oswego, N.Y.

"Southern Honey-Production — Present Conditions and Future Possibilities"—J. J. Wilder, Cordele, Ga.

"Bee-Keeping in Maryland as I See It"—N. W. Saunders, State Entomologist, Rockville, Md.

"Question-Box" after each session.

LOUIS H. SCHOLL, *Sec.*

New Braumfels, Tex.

"Nucleus" and "Nuclei"

Perhaps no words give more trouble to inexperienced apicultural writers than the two words *nucleus* and *nuclei*. It takes some time for the beginner to learn that when he has only one it is a *nucleus*, and not a *nuclei*. And after he has learned that *nucleus* is the singular and *nuclei* the plural, he is still inclined to make the mistakes of using the plural form instead of the singular when using the word as an adjective; as, "nuclei plan of increase," instead of "nucleus plan." Even so scholarly a writer as D. M. Macdonald lately wrote, "At present I will deal with nuclei-forming," and the error escaped the eagle eye of the proof-reader of that correct publication, the British Bee Journal.

Possibly the beginner thinks, "If I use the plan for making several nuclei it must be a 'nuclei' plan, while a nucleus plan would be for only one nucleus." But if he will think of parallel cases, he will view the matter differently. If a man is engaged in building houses, he is engaged in house-building, not in houses-building; if two cows are in a pasture, it is a cow-pasture, not a cows-pasture.

So let it be remembered that when we use the word as a noun, *nucleus* is the singular and *nuclei* the plural; but when used with the significance of an adjective the singular form, *nucleus* is always used.

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Bees Capture a Ship

A swarm of bees recently settled on the steamship "Alleghany," at Port de Paix, Hayti, and at the expense of the Hamburg-American line rode to St. Marc, a distance of about 190 miles by sea. According to the chief officer, the "Alleghany" was lying off Port de Paix, on the northwest coast of Hayti, June 23d. As the liner was about to weigh anchor, the swarm settled on the port of davits. A watch was kept on them throughout the day and night, and the next morning when the "Alleghany", was off St. Marc in Gonaive Bay, the swarm buzzed around the proffered hives, but soon made a bee-line for St. Marc. Captain Meissner was furious. No bees, no passage money, and empty hives!

The foregoing is according to the Baltimore News of July 12, 1910.

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Our Front-Page Brood-Comb Picture

We are not quite sure how the engraving on the first page this month is going to print, but if it looks anywhere near as beautiful as the original photograph it will be very attractive to bee-keepers. Mr. Walter C. Lyman, now and for many years past a bee-keeper at Downers' Grove, Ill., furnished the picture for the special purpose it is used this month.

In the original photograph even the tiny bee-eggs show in the empty cells in the center of the picture. This is the first time, we believe, that we have ever seen the eggs of a queen photographed where they had been laid in the comb.

It also will be noticed that many of the cells contain the curled up larvæ, whose pearly whiteness, of course, does not show so well in the picture, although some of them are very distinct. Just below the sealed cells of honey near the top of the picture, and also in the lower left-hand corner, will be seen cells filled with pollen. The lower part of the comb that is sealed over is worker-brood; while, of course, the top of the comb is sealed honey.

It seems to us that all this picture lacks is a lot of bees on the comb. That would make it about perfect. However, the eggs in the bottom of the cells could not be seen if the bees were present as in the natural condition in the hive.

We are hoping that this picture will appear very distinct when printed on the front page this month. The engraving is a very good one, as is also the original photograph. Of course, it would look better if printed on enameled paper, but such paper would not do at all in a publication like the American Bee Journal. It would also be too expensive.

We dare say that this number of the American Bee Journal will be preserved for the originality and beauty of its front-cover page, if for no other reason; although its contents, like its predecessors, should be well worth reading and preserving.

If you have any bee-keeper neighbors or friends who would like to have this number of the American Bee Journal, just show it to them, and ask them to send in their subscription at once, and we will begin it with this October number, and thus they, too, will have the unusual picture shown on the front page.

◆

Honey-and-Mummy Medicine

Honey is now and has always been an important item in the list of medicines, but in medieval times, according to an article in the London Hospital, it was used in a grewsome combination. The article says:

> Here is a somewhat disquieting recipe according to the manuscript of the Persian poet Nizami:
>
> "Take a man with red skin and hair; feed him with fruits up to the age of 30 Then plunge him into a stone vat filled with honey and divers other drugs; close up the vat and seal it hermetically. One hundred and twenty years later the honey and body will be mummified. Open the vat and serve up the contents."
>
> The mummy extract, says the German savant, was in common use in the 18th century, and as late as 1853 it figured in Austrian pharmacy.

◆

"The Practical Bee-Guide"

Six years ago the first edition of the Irish Bee Guide was published. A second edition has now appeared, and the title has been changed to "The Practical Bee-Guide." Concerning this change the author says:

> "The alteration in the title of the Guide has been made partly in acknowledgement of the fact that the sale of the book hitherto has not been chiefly in this country, and partly in deference to the wishes of the booksellers and of a large number of practical bee-keepers, who have assured me that the former title led to the erroneous impression that the Guide was suited only to bee-keeping in Ireland."

Certainly the character of the work warrants the change of name.

It is a work of something more than 230 pages, measuring 7x4¾ inches each, written by Rev. J. G. Digges, M. A., the genial editor of that sprightly monthly, the Irish Bee Journal. The style is clear, and of such character as to make the book pleasant reading, in spite of the fact that it is so compactly written that it would be hard to get more facts into the same number of pages. Each paragraph is consecutively numbered in bold-faced type, making the constant reference to these different paragraphs a matter of great convenience.

Notwithstanding the very practical character of the work, the author is a man with poetry in his soul; and in the first 14 pages, which are of a somewhat general character, there is beauty to be found equal to that of Maeterlink at his best, with this difference, that the Maeterlink flights are not always in strict accord with the truth, while every Digges sentence rings true. The heart of the genuine bee-keeper will be warmed as he reads the author's account of the awakening of the bees in spring:

"The sun, in genial humor peeping through the open door, gives to the long-imprisoned inmates assurance of kindlier conditions without; and the bee-man, watching for signs of survival, delights to see first one, and then another, and presently many of his little pets appear upon the alighting-board. Discreet in their new-found joy, they risk no long excursion, nor venture overmuch. Scenting the freshness of the air, they seem to revel in it, and in the heat and light which stir the life in them. They move about the entrance; examine the doors and porch; meet and salute each other; and rising, fly for a moment in front of the hive. A gladsome hour this for the bee-man also: an infectious happiness."

The bee-keeper who desires to increase the size of his library may do worse than to add to it a volume of "The Practical Bee Guide." We can order it for you, bound in art linen, for $1.10; or with a year's subscription to the American Bee Journal—both for $1.90.

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N. E. Wisconsin Convention

The Northeastern Wisconsin Bee-Keepers' Association will hold its annual meeting Oct. 19, 1910, in Mishicot, Wis., beginning at 10 a.m. All interested in bee-keeping are cordially invited to be present.

Chas. W. Voigt, *Sec.*
Tisch Mills, Wis.

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The Chicago-Northwestern Convention

Arrangements have been made for the 31st annual meeting of the Chicago-Northwestern Bee-Keepers' Association in the Club Room of the Saratoga Hotel, 159 Dearborn St., Chicago, Ill., Wednesday and Thursday, Nov. 30 and Dec. 1, 1910, beginning at 10:30 am., Nov. 30. This is during the week of the International Live Stock Exposition, which will be held in Chicago this year between the dates of Nov. 26 and Dec. 3.

The Saratoga Hotel is opposite the First National Bank Building. It makes a rate of $1.00 a day and up for a room with two or more in it. It also runs a restaurant, although bee-keepers can take their meals and also find their lodging elsewhere, if they prefer to do so. Heretofore the meetings have been held in the Briggs' House, but it was thought that the Saratoga Hotel would be a little more convenient, as it is right where so many of the street-cars pass in the heart of the city. Also, being only one block from State St., it is very convenient from all parts of the city.

A fuller announcement will be given next month. Be sure to hold open the dates above mentioned, and attend the meeting if you possibly can do so.

◆

Says Bees Have "Jag" Habit

Washington, June 8.—"The whole vegetable world is in a conspiracy against the prohibitionist. The bees become intoxicated with the distillation of the honeysuckle; the wasps grow dizzy in the drowsy clover patch, and even the ants wobble in their walk after they have feasted upon the over-ripe fruit fallen from the tree, which has started a natural fermentation."

The above passage, intended to show that the poor prohibitionist is up against a hopeless fight on the natural law of fermentation, is from the report of the executive committee of the United States Brewers' Association made today to the annual convention in session here.—*Chicago Record-Herald.*

This is not a prohibition journal, and there is no desire to enter into a controversy with the brewers as to the hopelessness of the fight for prohibition; but it may at least be permitted to enter a protest against trying to make our busy little gatherers an argument to uphold the vile business of the brewers. It shows they must be hard up for argument. Even if it were true that every bee that touches the honeysuckle becomes a confirmed inebriate, it is hard to see what that has to do with stopping the beer-guzzler's booze. But is not this brewers' committee the first to discover bees staggering on the honeysuckle? The brains of the members of that committee must have been unusually "dizzy" with the fumes of their own brew to furnish them the sight of a clover-patch all covered over with dizzy wasps. The usual thing seen by men in their condition is not wasps, but "snakes."

◆

The Michigan State Covention

The annual convention of the Michigan State Bee-Keepers' Association will be held at Grand Rapids, Mich., Nov. 9 and 10, 1910, in the Board of Trade Rooms, 97 Pearl St., beginning at 1 p.m., Nov. 9. The headquarters will be at the Eagle Hotel, corner of Market and Lewis Sts., where the evening session will be held.

Besides the usual routine business of the convention, the following topics, and in this order, will be considered:

The Aspinwall Hive a Commercial Success; The Foul Brood Problem; The Pearce Method of Bee-Keeping (illustrated); A Mail Order Honey-Trade; Uncapping Machines; Developing a Home Market; The Uncapping-Knife; Freight-Rates; Uniform Sections and Shipping-Cases; and What Smoker Do You Use? Why?

It is hoped that everybody who attends will come prepared to take some part in the discussions. A live convention is where each one has something to say. The topics will not be assigned to members not present, for if the one who is expected to open the discussion is not present the topics will be assigned to some one present. For this reason the names of those who are to take up given topics are not published. Here are a few of those who will be asked to contribute to the above program, but remember it is really expected that every member shall contribute something. Editors E. R. Root, George W. York, W. Z. Hutchinson; Hon. R. L. Taylor, Foul Brood Inspector for Michigan; Hon. C. C. Lillie, State Dairy and Food Commissioner; Hon. Geo. E. Hilton, Pres. L. A. Aspinwall, Vice-Pres. E. D. Townsend, N. E. France, Manager of the National Bee-Keepers' Association; H. C. Ahlers, Jenner E. Morse, and Prof. Frank Benton. And these are not all.

Every member should bring his wife, sister, or sweetheart. The ladies add life to the convention. You know you never had any fun going to a convention where there were no ladies.

The following prizes for exhibits will be offered:

Prizes and Exhibits.

Best 10 Sections Comb Honey.—1st. 1500 No. 1 sections, donated by G. B. Lewis Co. 2d. 1000 No. 1 sections, donated by A. G. Woodman Co. 3d. American Bee Journal one year, donated by George W. York & Co.

Best 10 Jars of Extracted Honey.—1st. $3.50 in supplies. 2d. $2 50 in supplies. 3d. One copy of A B C and X Y Z of Bee Culture, 1910 edition, donated by The A. I. Root Co.

Three Best Sections of White Comb Honey.—1st. $2.50 in supplies. 2d. $1.50 in supplies. 3d. Gleanings in Bee Culture one year, donated by M. H. Hunt & Son.

Cleanest Sample of 10 Lbs. of Beeswax.—1st. One Aspinwall non-swarming hive. 2d. One A. G. Woodman Co. protection hive. 3d. American Bee Journal one year.

Sweepstakes.—Best collection containing 10 sections of comb honey; 10 bottles of extracted honey and 10 pounds of beeswax; honey and beeswax shown in other classes, eligible in this. 2000 No. 1 sections, donated by A. G. Woodman Co., and G. B. Lewis Co.

A suitable space will be provided for display of honey, wax and appliances. Every member is urged to bring something for display. Be sure to bring your uncapping-knife, as there will be a comparison, and we want to know just what kind each member uses.

A. G. Woodman & Co. will have on display a power-driven extractor with gasoline engine. Also Hershiser wax-press, steam-heated honey-knife, and also the latest equipment.

M. H. Hunt & Son will have a 4-frame power novice extractor; steam uncapping-knife; Root's new uncapping machine, Root's new 1911 chaff hive, and other new up-to-date appliances.

E. D. Townsend & Sons will have a successful uncapping machine on exhibition. Also a steam-heated uncapping-knife.

L. A. Aspinwall will have his latest non-swarming hive on exhibition. This will have the latest equipments shown.

Every bee-keeper in Michigan is cordially invited to be present. Only $1.00 will pay for a membership for one year, or from now to the end of 1911. If a membership is also desired in the National Bee-Keepers' Association, add 50 cents, making $1.50 for the two associations.

Don't forget the place and date—Grand Rapids, and Nov. 9th and 10th—next month.

E. B. Tyrrell, *Sec.*
230 Woodland Ave., Detroit, Mich.

(Continued on page 325.)

"Scientific Queen-Rearing"

No other book compares with this one written by Mr. G. M. Doolittle. He is an expert in the business. It tells just how the very best queens can be reared. Bound in cloth. By mail, $1.00; or with the American Bee Journal, one year—both for $1.60. In leatherette binding, 75 cents, postpaid; or with the American Bee Journal one year—both for $1.25. Send to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Worker-Combs for Extracting-Supers

Dear Miss Wilson:—For the benefit of those who have asked, and of those who wish to know, what size cells our extracting frames consist of, I will give the information, with your consent, through our beloved Journal.

They are worker-cells, mostly. The reasons are many. The drone-combs have only two virtues, to my way of thinking, *i. e.*, they are so easy to sling the honey from, and the cells are then clearer of honey than the worker-combs. On the other hand, the worker-combs have much in their favor to off-set the drone-combs.

Reason No. 1.—By having all worker-combs they can be interchanged when extracted, whether they are taken from the top, middle, or bottom super, or brood-chamber.

Reason No. 2.—Supposing, for instance, we have a frame of drone-comb which has a little brood-comb in it, and among it we have a very fine, sealed queen-cell which we wish to give to a queenless colony; all that drone-comb would be in the way. We would have either to cut the drone-comb out or place it just as it is in the hive, or graft the queen-cell onto one of their frames, which takes time, and is accompanied with danger, unless managed by experienced hands.

As to the first method, it would just ruin the comb and be a set-back to the already weak colony, which, on rebuilding, would most probably build drone-comb there again. The empty space would be a "draft" in their home. So we would have to remove the frame anyway, unless, of course, we were short on drone-comb, which I must admit has never been the case with us, so far.

As to the second method, the frame would have to be removed after the queen had hatched, and more likely than not the manipulation would be neglected during the press of other work, and the queen would deposit drone-eggs there, whereas, had the frame been of solid worker-comb, she would have layed worker-eggs, and so have strengthened the colony so much, instead of setting it back by producing "bums."

If it was not neglected, and the frame was removed before the queen had mated, ten chances to one on opening the hive, or removing the frame, the young queen might leave and never return, or find her way back. I have noticed that a young unmated queen is generally "skittish," and is more easily alarmed than an older one, and being light of body she can and will fly, when a laying queen can not, even if she has the impulse.

Then, again, we might go to the colony to remove the frame while the queen was on her wedding-trip. On her return from her honey-moon she would most likely not recognize her domicile with the roof removed and a giant or two standing dangerously near.

Reason No. 3 is because on the approach of, or during the first part of the swarming season, what would we do with so many drone-comb frames in our method of keeping down swarming, as I explained in March, on page 73?

Reason No. 4 is when we want to reinforce a weak colony, we don't have to go through half of the apiary hunting for a suitable frame of all-worker comb. Any one will do provided it has enough sealed brood to meet the requirements of the colony we wish to strengthen.

Reason No. 5.—If we wish to feed honey to a starving colony, any frame we pick out will answer.

Reason No. 6.—If we wish to select a pollen-laden frame to stimulate breeding, any one will do.

In the three last-mentioned reasons the frames can be left in the colonies they are placed in, as there is no fear of the queen occupying *drone*-cells. Then the frames removed from the weak or hungry colonies being all-worker frames) can be placed where the ones given to them were taken from without having to place them elsewhere, and again hunting worker-combs to put in place of those given to the needy ones.

In this matter of having worker-combs for the extracting-supers, I am, probably, not following the orthodox methods, but time and again I have stumbled up against many an annoying circumstance. In one instance we had the brood-chamber full of beautiful worker-combs, and a super of drone-comb above. Well, the bees refused to store honey in the super for some reason or other, and put honey in cells of the brood-chamber as fast as the brood emerged, and by so doing forced the queen above. We then beheaded all the drones and gave them a set of worker-combs, and extracted the honey from below. The drone-combs we placed in other colonies not so "set" in their notions about storing honey in them. There was a decided change in their behavior.

When cutting out comb honey for our bulk-comb honey trade, I am glad indeed when we come to drone-comb frames. That many less incumbrances!

If I had my way about it I wouldn't have any drone-comb in the apiary, except, of course, in two or three of my very best colonies to produce the very best drones to mate with young queens.

(Mrs.) M. E. Pruitt.

Drone-comb is bad enough in extracting-supers, but it is still worse in section-supers. Where drone-comb is limited in the brood-chamber the bees are quite insistent on having it in the super, and are pretty sure to build it there if there is any chance for it; and then the queen goes up and makes trouble, unless one goes to the trouble and expense of using excluders. The wise thing is to have sections entirely filled with worker foundation, and then the queen so seldom goes up that excluders are not needed.

The Honey-Stealer

[*From Theocritus.*]

Dear little Cupid, thievish boy,
  Rifling a honey-bees's hive,
Suffered the price of a sting, alas!
  Pricked on his finger-tips, five.
Leaping and dancing in keenest pain,
  Swiftly he scampered away,
Hasting to Venus, his dear mamma,
  Crying, "Oh, mother, I pray
Tell me, O, tell me why the bee,
  Charmingly tiny fay,
Dealeth a wound so deep and sore,
  Tell me, O, mother, I pray!"
Venus then laughingly answered, "Ah,
  Cupid, you thievish elf,
You are a match for the wicked bee
  Your own little, naughty self.
You are a tiny, tiny boy,
  Charmingly tiny, although,
Deep and great are the wounds you deal,
  As gods and mortals well know.

Effie Haines,
in *Chicago Record-Herald.*

Bee-Hive Like a Rotten Potato

This ought to appeal to women—it's a sample of man's boasted logic. It comes from Philadelphia, where everything is done in a logical manner:

A number of men who were assembled in the offices of a brokerage company watching the ticker were discussing non-business matters between ticks. The conversation turned to logic. Up spoke one of the brokers:

"I can prove logically," he said, "that a bee-hive is the same as a rotten potato." His associates laughed. Perhaps they recalled certain occasions in the past when this same broker had convinced them that a hole in the ground was a gold-mine—but that was ancient history.

"Fire away," said one of the brokers who desired to avoid committing himself one way or the other.

"But I can really do it," the first broker insisted.

"It's absurd," replied a serious-minded listener.

"Perhaps," said the broker, "but it's logical just the same. Here's the proof: A bee-hive is a bee-holder, and a beholder is a spectator (specked tater). See?"—*Woman's National Daily.*

Not Honey Letters

Three bees that give no honey—Brag, Boast and Bluster.—*New York Life.*

Fastening Brood-Combs

When a frame of brood-comb happens to get broken out of the frame which is not wired, I use wooden toothpicks to fasten it in, pushing them through the holes in the frames made for the wires. I read to use nails, but the toothpicks are much better, I think. You can also fasten chunks of brood-comb together, then fasten in frames.

Ima.

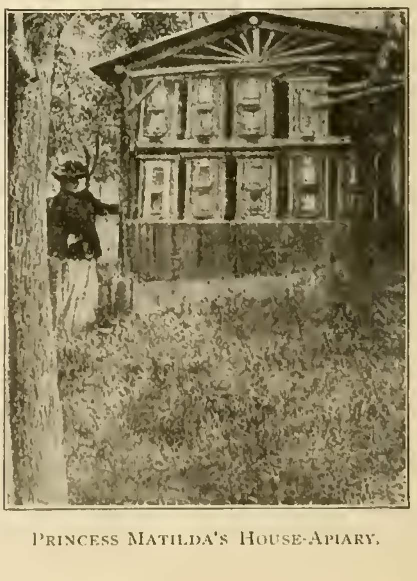
Bees Don't Like "John"

I noticed one day a guinea-hen picking at a stalk of grass blossoms within 6 inches of the hive-entrance. The bees did not seem to notice her, but let "John" come within 3 rods of the hive, and they soon take notice of him. As for me, I often take off the top of the hive without gloves, veil or smoke. It seems they like me, also the old guinea-hen, but not "John."

Ohio Bee-Woman.

House-Apiary of Princess Matilda

The Deutsche Illustrierte Bienenzeitung takes pride in giving a picture of her Royal Highness, Princess Matilda,



Princess Matilda's House-Apiary.

duchess of Saxony. Her interest in bees began over 12 years ago when, seeing a stray weak afterswarm hanging upon a currant bush, she took pity upon the poor waif, and gave it a home. Her apiary of 10 colonies occupies a very artistic house or shed, arranged German fashion, 5 in the lower tier and 5 above.

Honey-Frosting

Here is a good plan to make honey more suitable for those who can not eat it ordinarily:

Boil some comb honey, or better, extracted, until it is crisp when cooled. Dip in and well cover any plain or fancy crackers, and when cool they are fit to serve.—Herbert S. Hale, in *Gleanings*.

No King-Bee Now

An Amishman was telling me how he hived a swarm of bees, but did not get the "king," so the bees all died. With wide-open mouth, and eyes as big as saucers, he listened very patiently while I explained that there is no king-bee, only the lady queen that lays the eggs. The large drones are the lazy gentlemen—summer boarders—and the small bees that sting are the ones that gather the honey.

Thinking he was doubting my word, I said I had found this all out by reading the American Bee Journal.

The last I saw of him he was going up the road wagging his head and talking to himself. I suppose he was wondering, Can that be so, or is she daffy?

Ima.

Keeping Lard Fresh

To keep lard fresh for several months, stir in about a tablespoonful of honey to 6 or 8 gallons of lard after removing cracklings.—*The Practical Farmer*.

Beets and Honey

Miss Wilson:—I am sending you a description of the way I cook beets for table use. I hope you will try and get it into the next edition of "Honey as a Health-Food."

Cook the beets tender in salted water; take off the skin as soon as you can handle them; slice them into an earthen dish, and while still hot put a liberal amount of extracted honey on them and set them away until next day.

Now put on good cider vinegar and set away for 2 days more. Do not be stingy with the honey and vinegar.

This is from an "old batch" bee-keeper. I have had a good season with the bees.

Arden, Nebr. W. H. Mills.

We have tried these at our house, and pronounce them good. Some of the family like them better before the vinegar is added. Thanks.

Canadian Beedom

Conducted by J. L. Byer, Mount Joy, Ontario, Canada.

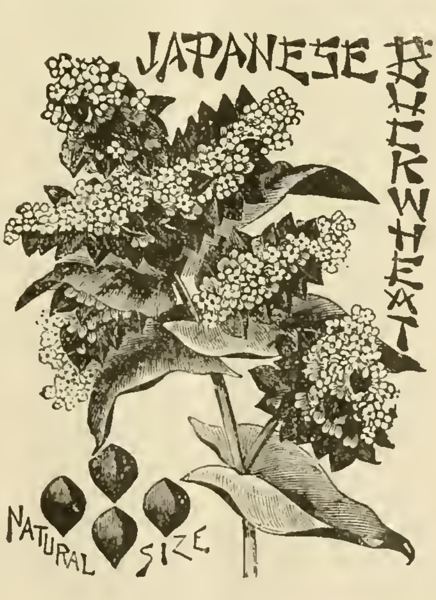
Honey Prices in Ontario

Mention has been made in these columns from time to time of the work being done by the Honey Crop Committee of the Ontario Bee-Keepers' Association. Only a few days ago the Committee issued their recommendations on the prices for buckwheat honey, and a statement is made relative to the way the clover honey has been moving that is very gratifying to every friend of the Committee—indeed, should be so to every bee-keeper in the Province, and it should act as an incentive to a more systematic selling of the crop in years to come.

In sending out the question blanks about the buckwheat honey crop, the bee-keepers were also asked to report what prices they have been receiving for the clover honey this season. Of the very large number replying, 95 percent stated that the prices recommended by the Committee in their August report had been received. Only 3 percent had sold at figures ranging from a fraction of a cent to one cent per pound less than recommended prices, while the remaining 2 percent had sold at from one to 2 cents less than said prices. As the prices recommended were slightly in advance of last year, quite a number thought they would not be uniformly obtained, but results would go to show once more that the Committee have, as in the past, exercised first-class judgment in performing the rather difficult task assigned to them.

The Buckwheat Honey Crop

The results of the buckwheat honey crop have been rather disappointing in so far as surplus is concerned, when the large acreage that was grown is taken into account. Most of the crop was late sown, and it was not until about Aug. 7th that the honey began to come in very fast. Then for a few days the flow was very heavy, but, alas, when that big gale with cool weather with it struck us on Aug. 26th, the buckwheat honey was done for the season. From then right up to date (Sept. 15) quite a quantity of buckwheat has been blooming, but hardly a bit of nectar has been gathered since the cool wave struck us. However, "it might have been worse," as in addition to the colonies storing about 30 pounds each in the supers, the majority have the brood-chambers very heavy, and the feeding bill will, as a matter of course, be reduced to quite a small item, comparatively speaking, as to what things would have been like with no buckwheat honey at all.



As to the buckwheat crop from the farmer's standpoint this season, it is, or will be, a source of many disagreeable thoughts when the harvesting commences. Sown late, and just when the heavy rains with warm weather came in July, and for the most part in rich summer fallows—the growth was phenomenal, and in some cases the plants were higher than the roadside fences. When the heavy wind and rain storms came during the latter part of August, the rank, tender stalks went down flat all over the fields, and now many of the fields are as flat as though a land-roller had been run over them. How will the crop be harvested? is the question that is engrossing the minds of quite a few farmers in our neighborhood at present, and probably few of them will not take chances of another "picnic" of the same kind another year.

However, this is an exceptional year, and we are not likely to have many repetitions in many things experienced this season, for many years to come.

Moisture and Nectar-Secretion

In another item I state that alfalfa for some reason had started to yield some nectar in our Province during the past two seasons—formerly it was, in our immediate locality, at least, a rare thing to see a bee on an alfalfa bloom. Mr. Holtermann, in Gleanings, says that the reason the plant yielded nectar was on account of the unusual amount of rainfall for the time of the year that we had this summer when the second crop of alfalfa was being left for seed. Not a correct diagnosis for our county, as with the extra moisture in the land this year, not half as much nectar was secreted in fields near us as was the case last year when the clover was blooming during a prolonged drouth. Just what conditions are necessary for nectar-secretion not only in alfalfa, but other sources as well, is an interesting problem that little is known about as yet.

During the past clover season we had some ideal weather, so far as a bee-keeper could judge, and yet the many fields of beautiful, sweet-scented alsike yielded so sparingly that on some of these days the bees would rob if honey was exposed. On the other hand, only a few years ago we had a long spell of cool weather right in the clover bloom, and more than once my records show that the bees were rushing in the nectar with the thermometer in the 60's—a very unusual condition of affairs as all in the clover belt are aware.

Alfalfa for Honey in Ontario

Alfalfa has been grown in a small way for a number of years all around us, yet previous to the summer of 1909, it was a rare thing to find a bee on the blossoms of this plant. Last summer, however, the bees worked freely on some that was left for seed after having first had a crop taken off for hay. This summer the same thing is true to a greater extent, and at this date (Aug. 17) the bees are swarming in the afternoons on a field that is being left for seed near us. Mr. Adams, of Brantford, reports that one of his bee-yards is storing a surplus from the same source, as in that locality a lot of the clover is being left for a seed crop. It certainly begins to look as if alfalfa might figure as a honey-plant here in Ontario in the near future, although why it is just starting to yield nectar seems a bit strange.

Perhaps the plant is getting acclimatized better. Certain it is that in "our locality" there formerly was no nectar in the blossoms. If we could only get the farmers not to cut the hay so early, when it is just starting to bloom, we might get a lot of honey from the first crop. It is now up to us as bee-keepers to get a law passed compelling the farmers to leave the alfalfa until the bee-keepers say that they may "now go ahead and cut it." But before such ideal legislation as that will be possible, legal control of bee-territory will have to be an established fact. When all these little points of law are working nicely, won't the bee-keepers have a happy time? Really, it makes one think that he is living a century too soon when we meditate on the good things in store for our grandchildren who will be keeping bees in our stead.

Alfalfa.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

How Bulk-Comb Honey Is Put Up for the Market

To produce a crop of honey is one thing; to put it up for the market is another thing; and to market it after the crop is produced and put up is still another. It is fun for us to produce a fine crop of bulk-comb honey; it is simply fine to have tons and tons of nice white and delicious combs of honey as fancy as any fancy section honey, but produced so much cheaper, and with so much less work.

Then it is fun for us to pack it in the various size containers ready for the market. It means just that much clean cash for every case of bulk-comb honey that we are able to put up in the honey season. I say bulk-comb honey, for with section honey, and also extracted honey, this has never been the case with us. Section honey has a limited demand as compared with our bulk-comb honey, and the same relation exists between extracted and bulk-comb honey. In proof of the latter I need only say that a host of extracted-honey producers write and ask me where they might find a market for their extracted honey quite a while after we have sold out our bulk-comb honey entirely. A number of such enquiries are on my desk now. Another proof of this fact is that out of every 50 or more orders for honey, amounting to several hundred cases of honey, all is for bulk-comb honey, with only a few cases for extracted honey scattered far and wide through the season.

In the last issue the readers were shown the way the honey comes from the hives, and how bulk-comb honey looks in the frames just as taken from the supers. Unfortunately this does not show up as it should, due to much of the details being lost in the half-tones when printed. But these combs are cut out of the frames as shown in one of the pictures herewith, where the writer is at the "job." The frame removed, the comb is cut in two through the middle, and each half laid side by side in the large-mouthed, 8-inch screw-cap square 5-gallon can, forming a solid layer of comb honey. The next 2 pieces of comb honey are then laid across the first layer, and so on until 10 combs have been placed in the can.

The cans are not removed from the cases in filling them, and after the comb honey is filled in, extracted honey is put in to fill up the cans. This fills the empty spaces, and besides making up the weight it keeps the comb honey buoyant in the cans, and no matter how much they are handled, the comb honey does not become mashed up as some seem to suppose, from the letters and enquiries that have been received.

Bulk-comb honey in these large cans is listed as "Bulk-Comb Honey in two 60-pound cans to a case," and sells as 120 pounds at from 10 to 11 cents per pound f. o. b. the producer's shipping point. The dealer buys this in these large cans to retail again out of the original package. He pays the freight, which he adds to the price of the honey, together with his profit, and it is seen at once that it brings quite a good price by the time it reaches the consumer. Many consumers who can use a 5-gallon size, or 60-pound can, order direct from the producer. If only one can is ordered, we charge half cent extra per pound for the difference of making an extra shipping-case for a single can shipment. Many consumers join in with a neighbor and order two cans in a case, thus getting the benefit of the regular price. The price to the consumer direct is generally always a little higher than that to the large dealer, as far as we can do so to allow him his proper share of profit.

A great quantity of our bulk-comb honey is put up in smaller size packages, however, which are then sold to the consumer in the original package by the retailer. These are 3-pound cans, and 6-pound and 12-pound pails of the friction-top kind. The second picture herewith shows a variety of these. Unfortunately we had no 6-pound size pails on hand when the picture was taken. But the 3-pound cans are shown in the center of the picture. These are standing on top, and a few in front of the shipping-case in which they are sent to market. This case holds 20 of the 3-pound cans, making a 60-pound package. A case of the 60-pound pails is shown at the extreme right in the picture—ten 6-pound pails also making a 60-pound case.

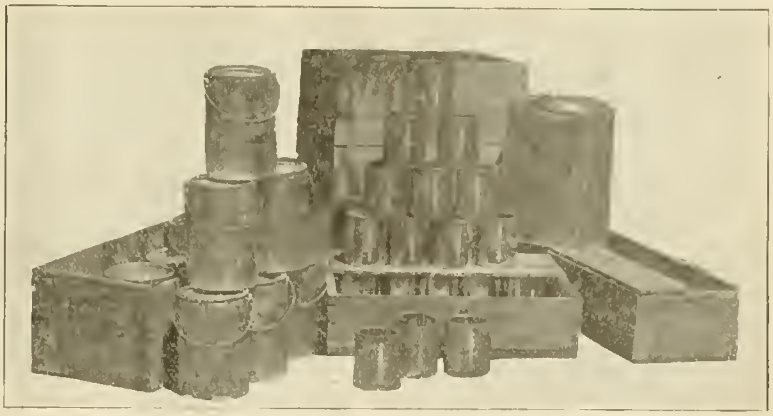
To the left are 12-pound pails and their case, in which 10 of them are shipped, making a 120-pound case. Then there are the familiar large size 60-pound cans and their case, except that these cans have a very large 8-inch opening to allow the packing of the comb honey in them. This is another 120-pound package.

The comb honey for these is cut in various ways, each size of can or pail requiring different cutting of the combs. For the 12-pound pails the comb is first cut in the middle, as for the large 60-pound cans. Then each of the halves is cut again in the middle so as to make 4 squares of comb honey to each comb. These are then laid in the pails flat, one on top of the other 6 layers high. Then the pails are filled with extracted honey. For the 6-pound pails the combs are cut into 5 pieces across the comb, and 4 layers make the pails full enough to be filled with extracted honey. But for the 3-pound cans it is necessary to cut off from one edge of the entire length of the comb, a one-inch wide strip; then cut across the comb, strip and all, as it lays on the cutting board, 5 times, so there will be 6 square pieces of comb for the wide part left after the strip has been cut off. The strip itself will be cut into 6 narrow pieces about half as wide as the squares. These are now placed 2 side by side at the bottom of the 3-pound cans. The 6 pieces of the strip will thus make a bottom layer in 3 cans. On this are placed the square pieces 2 in each can, and thus filling 3 cans with comb honey with one comb. Filled up with extracted honey these make nice packages, and by having the different sizes we can furnish it in any quantity desired. The price of these smaller packages is correspondingly higher, of course. The 12-pound pails list at ½ cent more per pound by the case than the two 60-pound cans, or 10½ to 11½ cents per pound. So the others, the 3-pound cans selling from 12 to 12½ cents per pound f. o. b. the producer's shipping point, in case lots.

In figuring the price obtained for the *actual comb honey* at the above figures, it must be remembered that at least one-third of the contents in the packages is extracted honey selling at the same price. It must be remembered that we get a better price for our extracted honey in this way; or, if we figure the regular price of extracted honey, and deduct it from the whole we get a *pretty fair* price for our comb honey. To this must be added the fact that it is much less expensive to produce bulk-comb honey in frames than section honey, and that we can obtain a much larger marketable crop of it under any conditions, and we can market it cheaper and easier. These are items that favor the production of bulk-comb honey to such an extent that its production will become more popular as soon as it is better understood.

Be it remembered also that this article does not cover the variety of packages for bulk-comb honey that have been used by ourselves, and neither those that are to be used later. However, the tin receptacles shown herewith are the ones in most common use, and in which the greater bulk of the Texas honey crop goes to market. In fact, these sizes of cans and pails are Texas' own standard, being adopted as its standard sizes of honey-packages, years ago, by the Texas Bee-Keepers' Association, when the writer was its secretary; and I remember well when the matter was taken up with representatives of the largest can manufacturing concern of the country, who came all the way to Texas to give us what we wanted to pack our bulk-comb honey in.

Cutting Bulk-Comb Honey Out of Shallow Frames.



Tin Cans for Marketing Bulk-Comb Honey.

Contributed Articles

Fight Against Bee-Diseases

BY C. P. DADANT.

In these times of progressive and strenuous bee-keeping, the greatest drawback is caused by the spread of bee-diseases, especially diseases of the brood, for there are luckily no very dangerous diseases of the bees themselves outside of the May disease, which is comparatively rare, and readily disappears.

The buying, selling and shipping of bees, the mailing of queens, are all possible causes of the transmission of brood-diseases, but by far the greatest cause is the shipping of honey. There is but little doubt in my mind that the reason why bee-diseases are so readily spread in the vicinity of large cities is that honey from all directions is brought to these cities, and often kept exposed in groceries where the bees may reach it. Their disposition to loot—when no crop is to be had from the fields—is certainly responsible for a great many mishaps. If we could convince our friends in the cities of the great losses to us by the thieving disposition of our bees, we would have better consideration, and would perhaps also get them to place the honey in more secure quarters. How often have we seen a case of comb honey with a broken glass in front and a dozen or more bees flying in and out! Very few of our grocers are aware of the fact that bees attract each other to the spot where plunder is found, and they do not realize the danger of letting any bees get a taste, until too many have found the prize.

It is now evident (Cheshire to the contrary notwithstanding) that honey is the best transmitter of the stinking American foul brood; and the worst feature of it is that the honey does not in any way show it, for it contains only invisible germs, that have no odor, that do not mar the honey in any way for human consumption, and that are, perhaps, often in such small numbers that a casual microscopic examination would fail to discover them. Yet these germs, when placed in the larval food, reproduce rapidly by millions. So we are unable, when we see strange honey, to recognize by any method whether that honey is free from taint.

Never, then, should we feed our bees upon honey of which we do not know the source, no matter how fine and white it may be. Such honeys should be kept strictly away from the hives. We should urge our grocers to keep all honey in well-closed vessels or cases during the months when the bees can fly. Luckily, most of the honey handling, selling and consuming is done in cold weather, when the bees are confined to the hive. There should not be much difficulty in keeping it from the bees.

Each apiarist should keep his eyes open, so that in case of contagion he may stop it at its first appearance. A few cells of diseased or dead brood would soon spread to the entire colony. Neighbors should be warned also.

In connection with this, we should remember that slovenly apiculture will always cause trouble. The apiarist who allows his bees to build the combs crooked in movable frames, so that they are in fact immovable, is courting trouble. He relies on luck, which is not always with the reckless. Our deceased friend, J. M. Hambaugh, one of the former Directors of the National Bee-Keepers' Association, insisted that the keeping of a box or gum hive should be entirely forbidden, and that bee-keepers who knowingly kept hives of bees that could not be inspected should be fined. This very rigid view was due to his having had a great deal of trouble in California, at different times, with apiaries where foul brood existed, when the combs could not all be readily inspected without causing breakage and leakage of honey. The evidence of difficulty in detecting foul brood in a box-hive apiary is shown in the treatises of former days. Hamet, for instance, in his "Cours Pratique d'Apiculture," published some 60 years ago, informs his readers that the existence of foul brood is detected by the lessened activity of the bees of the colony, and by the deleterious odor which the hive exhales. At the present day, the apiarist who allows the disease to go this far is pretty sure of a tremendous loss.

Having had no experience with foul brood, I had a magnified idea of its danger until I took a trip to the West, several years ago. In one of the irrigated valleys where bees are kept in thousands of colonies, I saw foul brood for the first time. It was there that I learnt that it was possible for a man to have foul brood for years, in a latent condition in his apiary, if he kept fighting it, while his neighbor's bees were immune. It was there, also, that I found that one man could get rid of it promptly because of his energy and thoroughness, while the other would retain it year after year through his neglect or lack of management. One man harvested big crops and had his bees in fine shape, while a neighbor less than 5 miles away discouragingly remarked to me that he who had the disease in his apiary once could never be sure that he was rid of it.

Reader, this is the difference between care and carelessness. Take your choice.

I will not attempt in this short article to give the remedies or methods of cure for the different forms of brood-diseases. The McEvoy method for ropy foul brood, the Alexander method for black brood are, I believe, acknowledged as the most positive. But what is done must be done rightly, for a single germ left may produce millions of bacilli.

That we will sooner or later succeed in entirely exterminating these diseases, or in making them practically harmless, is certain; but it will take time. Meanwhile we must keep a vigilant eye on our apiaries.

Hamilton, Ill.

Essentials of Section-Honey Production

BY LEO E. GATELEY.

In view of the phenomenal and unprecedented wave of universal popularity with which for the past several years extracted-honey production has swept irresistibly over the field of American apiculture, flooding the markets with a deluge of liquid honey, the question of over-production in its relation to the section variety becomes more and more inconsequential and remote. At present, and perhaps for far into the future, the recently rediscovered article introduced under the appellation of "bulk honey" will, no doubt, further diminish the available supply of comb honey. In connection with all of which there arises a new factor in profitable comb-honey production, alive with tremendous possibilities and vast significance.

In the production of section honey a large increase of colonies is generally associated with a diminution of surplus in direct proportion to the degree to which division of the working force has extended, in view of which, if satisfactory results are to be anticipated, the natural tendency of the bees to swarm must of necessity be curbed and discouraged to the utmost.

As spring advances and colonies become populous, additional room is with sectional hives given by inserting an extra division between the two parts of the brood-chamber. With the hives sufficiently shaded and ventilated, the addition of this third section, through relieving the crowded and congested condition of the brood-nest, checks and prevents swarming until the supering season. At that time radical and stringent measures are taken to eradicate the reproductive instinct. This is gradually accomplished through certain manipulations of the brood-sections, calculated to rid the hive of all brood, and leave eventually the colony upon new combs and foundation.

When giving supers to such colonies, they are slipped beneath the upper brood-sections, which are by this time usually about half full of new honey. When after a few days the foundation in the boxes has been sufficiently drawn out to receive this honey, the upper section is shifted to the bottom of the hive. The honey it contains will consequently be rushed precipitously into the sections, affording unusual and ideal conditions for extraordinary super work, especially where separators are used.

The shallow sections of the divisible hive are also used in connection with full-depth frames that we have on hand. These shallow chambers should be of inestimable value in any well regulated comb-honey yard, especially if the regular hives be of 8-frame capacity. They can be used to advantage in various ways above the brood-chambers early in the season to discourage swarming and to hold odds and ends of honey previous to the main flow, and particularly to keep it out of the brood-nest. The addition of such shallow chambers affords a gradual enlargement of the hive that seldom affects appreciably the colony temperatures. The addition of full-depth bodies not only provides more room than the bees can warm and utilize readily, but lowers perceptibly the brood temperatures, occasionally giving weak colonies a grievous and unwarrantable setback.

As our section frames and brood frames are of precisely the same outside dimensions, we frequently, when short of baits, use a new brood-comb in the center of the first supers given, and find they work to perfection. Some of these are made with perpendicular crosspieces to correspond with the edges of sections coming in contact. Occasionally we have used for this purpose combs containing a small patch of unsealed brood with no bad results, though in theory such procedure would invariably lead to the undesirable storing of considerable pollen in adjoining sections.

To produce section honey most profitably, it is primarilly and essentially important to secure at all times a fancy article. The cost of production for a cheap and inferior grade is no less than for the more marketable and correspondingly higher-priced product. Although by dint of relentless scraping and much unprofitable labor it is possible to remove from them most of the propolis and stain, the only logical and satisfactory way of insuring good appearance is to have sections enclosed in wide frames. In our surplus arrangements these 4-piece section-holders rest simply on flat tins in the usual fashion, and are keyed up with follower and hive-springs. No separators are used or deemed desirable.

Sebastian Co., Ark.

Some Very Knotty Problems

BY G. M. DOOLITTLE.

With most of the puzzles coming up in bee-keeping I just take them to the bees for an answer; but here are some that have lately come up which the bees do not seem to answer readily, or do not answer to an extent sufficient for me to understand. During several trials with a self-registering thermometer, I found that the temperature necessary for brood-rearing was from 90 to 98 degrees. In other words, in some 5 or 6 different experiments with full colonies and weaklings, during times of heat as well as during frosty nights, I could not find a single instance where a temperature of less than 90 was registered, nor one of more than 98 degrees F. So I set it down that the right temperature for brood-rearing was between and including the two.

All went along smoothly in this matter, as far as my mind was concerned, till one spring I had a colony that became so reduced in bees that there were scarcely more than 200 in it. On opening the hive I found that these few bees were keeping a quantity of brood going to a number fully equal to that of their own, but all of this brood was on the "inside" of two combs. In other words, this little handful of bees were not sufficient to cover one comb, the best they could do being to cluster between two combs, and have brood in the side of each of these next to themselves. Thus the eggs and larvæ, which need the most heat, were in the bottom of the cells or in the center of the combs, on the opposite sides of which was no warmth, with the base of the cell-partition not thicker than a sheet of writing paper.

Soon after I discovered this (to me) strange state of affairs (for up to this time, except with warm weather and very strong colonies, I had always supposed, from all my observations, that if there was any brood in any comb, that brood was of nearly equal amount in the cells on both sides of the comb), there came a night so cold that the mercury went down to only 35 degrees above zero, so that a temperature of but 40 appeared between the two combs right opposite the brood in the little cluster. I expected that the brood, especially the one and two days old larvæ, would all be dead, but, to my surprise, when it came warm enough so I could look the next day, all the brood was as prosperous between those two combs as was the case with large colonies. I said to the 200 bees, "You little rascals, tell me how you did it?" But neither the bees nor the queen could give me a satisfactory reply. So I am still puzzling myself over this matter. Have any of the readers of the American Bee Journal a satisfactory answer?

And right here comes another item: Not long ago, in conversation with a bee-keeper, he said "bees seem to possess the power to retard the development of both eggs and larvæ, as also to hasten this process." I felt like saying, "Which may be true or it may not be true."

That the development of young bees is greatly retarded at times, and accelerated at others, no close observer will deny; but the question in doubt is whether the bees have the power of thus hastening or retarding the development, or is it the condition or state of things over which they have no control? I believe that the egg is changed into a larva when the egg is "ripe," only as it is touched by the pabulum from the nurse-bees, and thus far consider that the bees have perfect control over the hatching of the eggs; but further than this, I think that the time of year, temperature, etc., have more to do with the matter than the bees. A term of extreme heat for 10 days to 2 weeks will so hasten development that I have known perfect young bees to emerge in about 19 days, while very cool or cold weather so retards this development that several cases of worker-bees being in the cell for 23 and 24 days have come under my notice. But to be fair, I must state that in all cases of such development it has come in the fall or the year of after Sept. 1st, at which time the bees pass into a less active mood than is the case during May, June, July and August.

How my attention came to be called to this matter was through the time of the queen emerging from queen-cells placed in a queen-nursery, the same being put in place of a frame in an upper story over a strong colony. Such cells would not hatch regularly after Sept. 1st, the time varying from the usual 16 days up to 24, and in one or two instances still longer or not at all. On looking for the trouble, I found by observation that the brood in the combs on either side of this nursery was as tardy of development as were the queens. From this I came to the conclusion that there were times when through the sluggishness of the bees they really did have something to do with the matter; but in all times of activity in the hive I doubt very much about their being able of their own *will*-power to change matters very much along this line.

I now come to the last puzzle which is, how the bees are able to keep the inside of the hive as cool as 98 degrees in time of extreme heat; for, as I said near the commencement, with experiments conducted with a self-registering thermometer, and that on some of the hottest days did I ever know of a temperature greater than 98 degrees F. inside of the brood-nest. How the bees can keep down the temperature of the hive is more than I can see. I am told it is done by ventilation through a row of bees standing at the inside of the entrance, and another row on the outside, when, with the fanning of their wings a current of air is driven even to the remotest part of the hive, thus keeping the inside of the hive at the right temperature for the prosperity of the brood. But mind you, in one of my experiments with the thermometer, the temperature in the shade was only 2 degrees lower than that registered in the brood-nest, while this hive, inside of which the thermometer was placed, stood right in the "blazing sun," which gave a temperature of 127 degrees by another thermometer placed on the hive. Then that very same day I had proven that animal life inside a hive with no bees could not exist on account of the heat, as (for the time being) I had thoughtlessly placed a sitting hen, which I wished to break of that trouble, inside such a hive which was in the sun. Much to my astonishment, when I went after the hen an hour or so later, I found her dead and nearly roasted.

Can the bees keep down such a heat by ventilation, when the air outside is apparently as warm as it is inside? May they not have some other means of doing it? I have been told that the bees do this by the evaporation of the nectar brought in from the fields, as the converting of nectar into honey causes a vapor, which carries off the heat very rapidly. But this idea failed to hold good in this case, as the time was between basswood and buckwheat, when nectar was so scarce that I was in trouble from the bees robbing.

Who of the readers of the American Bee Journal are enough interested to help in the solving of these matters?

Borodino, N. Y.

An Experiment With Hornets

BY G. C. GREINER.

From observation it would seem that hornets, generally called "yellow jackets," have their ups and downs in wintering, the same as bees. At least they are more numerous in some seasons than they are in others, but whether this is caused by the difference in wintering, or some other cause, I can not say. Last summer they were uncommonly numerous during the honey season. Wherever a little honey was left exposed they would appear in regular swarms to take possession, and even when hives were being opened they could be seen circling around among the bees trying to find an entrance.

One morning, while walking through the yard, I noticed at the entrance of one of the hives quite a commotion, caused mainly by these yellow fellows. They were going in and out at one end of the entrance in regular strings, while at the same time bees were guarding the other part of the opening. My curiosity being aroused, I opened the hive very carefully and found the outside comb on the side next to the hive-wall completely covered with hornets.

To investigate the case a little closer, I began to remove this comb, but before I had it drawn half way out of the hive, the whole set of marauders was in the air. They seemed to be frightened at my interference and took wing at the first stir of the comb. While the inside of the comb was in normal condition, covered with bees like any comb drawn from the center of an average colony, the outside, where these hornets had been feasting, looked very much like a comb that had been robbed by bees.

To explain the case, which otherwise might seem a little unusual, I will state that this colony was not in normal condition. To make room for a number of laying queens, I had made some divisions, placing one-half of a colony in an empty hive and giving the new queen to the queenless half. To help fill out the hives, I had also given each half one comb of honey, which was placed on the outside of the other combs next to the hive-wall. The hive in question had been moved to a new stand and many of the flying bees had returned to the old home. This left the inserted comb of honey somewhat unprotected, and our friends, the snooping hornets, had found the treasure.

Now comes the amusing part of the story: Examining the other half of the divided colony, I found their comb of honey well covered with bees, and to try the experiment, although I had no idea what the outcome would be, I quietly exchanged these two combs. As long as I was moving about the hornets kept at proper distance, but the air was full of them, and as soon as I had restored everything to its former condition and had retreated to a safe place of observation, the fun began in earnest.

In less than a minute the yellow crowd began to circle closer and closer around the entrance until some of the most daring made the dash for the supposed feast. But their surprise was complete; the first one had hardly entered when it came tumbling out with 3 or 4 bees dangling from its extremities. The second one received the same treatment, and the next fared no better, and in less time than it takes to tell it, half a dozen fierce wrestling matches were in progress on the alighting-board.

Being very busy at that time, I did not remain until the end of the contest, but I staid there long enough to satisfy myself that no more hornets were admitted into that hive. Later, when passing the place, I found everything quiet and in normal condition.

In connection with the foregoing incident a few more interesting points might be mentioned.

First, no hornets were killed or in any noticeable way disabled by the bees. After tumbling around for a few minutes, they always freed themselves from the grasp of the bees and disappeared in the air, none the worse, seemingly, for the combat.

Second, no particular harm is done

to a normal colony of bees by the invasion of hornets. Even moderately strong colonies seem to be sufficiently able to resist all attacks of these pests.

Third, hornets have no faculties to gather nectar from flowers, as have honey-bees. During the honey-flow not a single bee would notice exposed honey while the hornets gathered in large number to help themselves to the free lunch. They were either physically unable or else they have not the disposition to put themselves to the trouble of gathering Nature's product themselves.

La Salle, N. Y.

2.—Pointers on Selling Honey

BY WESLEY FOSTER.

In the September number I told about the value and necessity of making a favorable impression. This is nothing more nor less than getting the confidence of the prospective customer—at least enough of it so that by an honest, straightforward interview one can interest him in the goods and then lead him forward to a desire for the goods, and hold him in this state of desire till he resolves to buy, and gives you the order.

There are as many different kinds of people in the world as there are people, and one way of approach might be effective, with one and repel another, so it is best in starting out to sell honey, or any other article, to cultivate a uniformly gracious manner, quiet dress, and unobtrusive approach. There are those who are won by bluster, and others by "loud" clothes, but these also may be handled by the calm, self-confident man who at all times is at his best.

A point that has helped in meeting people and adjusting myself to their temperament is to notice the characteristics of each, whether quick in thought and grasp of ideas, or slow and deliberate. One will unconsciously speak more rapidly and concisely to a man who displays a nervous energy and shows that he wishes to get at some other work. With the more deliberate and the ones who wish to settle some weighty question of state with you before proceeding to business, you will do well to catch their desire for a visit, and forget that you have honey to sell. If we can but develop every faculty of perception and discrimination we will be able to judge correctly of the proper and most effective manner of greeting people. The unconscious manner we assume with different people is generally the correct one, but this can be greatly improved by close observation and study.

When I go into a man's store and meeting him he says that he has no time to look at my honey, he may be making the statement from one of a number of motives. The skill of the salesman is here taxed to determine whether he is telling the truth or does not have confidence in the salesman, or merely does not want to buy any goods. The man who believes everything that store-keepers tell him will not make the success in selling that the man will who knows human nature better, and realizes that men are very prone to give the wrong reason. They will say that they have a good stock on hand when they have none, and really mean that their profits are not satisfactory, and so have to limit their buying. I have been told by the prospective customer that he was not in the market for honey, when what he wanted was a treat at the saloon across the street. The great point in meeting objections is to have a chance to give a good, clear talk on the goods before the grocer has a chance to get an objection in at all. Objections then can be more effectively met since the mutual interchange of ideas has already taken place, and any objections offered are open to clear and positive treatment by the salesman.

One need not have any lower opinion of the men he deals with, to recognize that they do not always say exactly what they mean. One quite often finds men who talk as if they were doing a great business when the evidences about the store do not warrant it. One should not make any statements that will cross the ideas of the customer, but at the same time if he is canvassed according to the amount of business your judgment says is about right, the chances of getting an order will be much better than if you take the man's word for it, and try to sell him a bill according to the size of business he represents that he does.

The study of men and their ways of thinking is worth a college education if entered upon and followed up in the right way. The true salesman makes his trips but a round of pleasant calls among friends who are glad to see him, and from whom they can get the newest ideas in business and life.

The silent objections—the ones that the customer does not mention—are the very ones that are most in need of being met. These spring from a lack of confidence in the salesman, or a natural reluctance in giving the real conditions of the business. Only close observation and some intuitive sight will aid one to know these silent objections, and to answer them in a gracious manner. If the salesman does hit the right objections and answer them before spoken, the chances of making a sale are very much greater than where they are allowed to go unanswered, and in most cases spoil the sale unless some other points in the talk so overshadow the importance of these silent objections as to destroy their influence. Salesmanship is the manner of getting the customer to think of the goods as the salesman himself thinks of them, so it is very essential for the salesman to have the utmost faith in his line and be enthusiastic about it. Whatever we are intensely interested in we can enthuse others about, for enthusiasm is catching. Enthusiasm will, by its very force, bear down many an objection that otherwise might spoil a sale.

It must, however, be tempered by wisdom, for there are conditions to be recognized, such as the fact that many people do not care for honey, and a grocer cannot be expected to do a lot of educational work among his customers, for it is just as profitable for him to sell corn syrup as honey, and the chances are that it is more so. In selling honey one should build a *quality talk*. Honey is to corn syrups the same as wool is to shoddy in clothing, and the most of this point should be made. It is Nature's only sweet, just as she makes it, and has been the sweet of man for ages.

Every grocer and dealer likes to talk business conditions with every salesman, and most of them are in the habit of pumping salesmen for all they are worth in order to get the most reliable news about trade and prices. This makes the work easy for the salesman, because if he can supply valuable and interesting points on these subjects that are vital to the store-keeper, he will have a much better chance of making a sale. The alert salesman will easily gather the knowledge as he goes along, and so will always have the valuable points at his tongue's end.

Perhaps the reason so many who sell honey do not have a continuous success is that they get into a rut and forget to develop and perfect the manner and material of their selling talk. I never favored a set speech, because it is too artificial, but one should always be sure to have the strongest points well presented in every interview, and then to bring in as many points as will make the talk spontaneous and original, with no stereotyped phrases.

For we bee-keepers nothing is more telling than a talk on bees, honey and honey-flora. There is scarcely a man who has not at some time lived on a farm, and bees are always a source of interest to those who have had anything at all to do with them. Many who know nothing about bees are anxious to know something about them, and confidence can be developed quicker by this method than in any other way. A straight-forward bee-talk will dispel the fear of adulteration quicker than any method I know that a bee-keeper can use.

In all these points on interesting the prospective customer in our honey it really comes down to inspiring confidence, and convincing the grocer that he can make a good profit by handling our goods. A positive, affirmative attitude, and an alertness in using points that come up at the spur of the moment, will keep one out of the ruts that so many would-be salesmen fall into.

Salesmanship is a science of making friends, and the personal development one receives makes one feel that it is time well spent.

Boulder, Colo.

An Incubator Bee-Hive

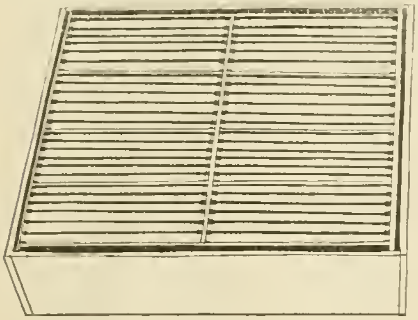
BY LEON C. WHEELER.

That is what my wife calls it; I call it my "baby hive." It's the hive where I hatch out my baby queens, so perhaps either name would be appropriate. Many would consider it anything but a baby, however, were they to see it.

It was built, originally, as an experiment, carrying out the idea of many bees together storing more honey in proportion than a smaller number. I am not sure yet that it couldn't be made to pay in that capacity, if properly arranged for wintering. The hive is built as follows:

There are two rows of standard frames with a 2-inch partition between, the frames hanging on rabbets on this partition and corresponding ones on the outside walls of the hive.

Each side contains 20 six-frames or 50 two-frames, in all, or, as I use it, 21 frames on a side, with 3 division-boards.



Hive-Body or Brood-Chamber.

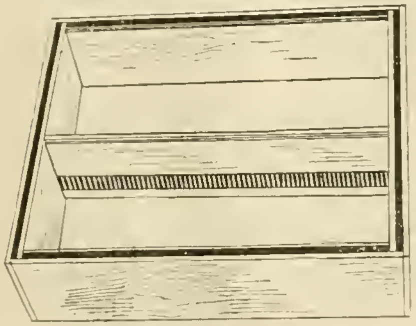
making 4 divisions in each side of the hive, or 8 in all. This allows for 8 queens all together.

The partition between the 2 rows of frames has a 2-inch space near the bottom extending the full length of the hive, and left open except for wire-cloth which keeps the bees apart, but allows a common scent throughout the hive. All division-boards are also about half wire-cloth.

There are 4 entrances on each side, one for each queen and her progeny, and 4 extra entrances at the ends, two at each end, for use until queens are mated.

When the hive is filled with nuclei, the entrances are arranged as follows: Two center entrances on each side left open, with a board fastened up between to help the queen to get back into the right place on her return from mating. The outside 2 entrances on both sides are closed, and those in the ends of the hive opened in their stead. This arrangement leaves very little danger of queens getting into the wrong place, and I have never had any trouble from that source. As soon as all queens are mated *all* entrances are opened on the sides of the hive and the end ones closed.

The first year I started 1 and 2 frame nuclei in it, and although they were started late they were all built up until each had their 6 frames filled solid with brood and honey, at the close of the white honey-flow.



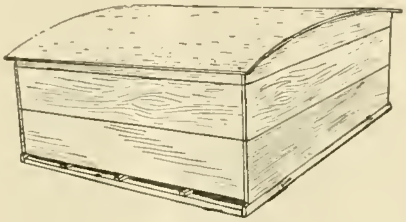
Empty Super Holding 52 Full-Depth Frames.

I had a huge super, or upper story built, containing 52 standard Hoffman frames, which I placed on top, and then stood back and watched results. It was a very light fall flow that year, and from 27 colonies, aside from this one, I secured only about 150 pounds of extracted honey. The mammoth colony alone stored 120 pounds of fall honey, or within 30 pounds of as much as all the rest combined.

Late fall, however, showed the weak point in the hive. There is a large cover that goes over all, and then each partition has its individual cover. These little covers would warp, or perhaps failed to fit perfectly in the first place, and when fall came those queens got to visiting. The consequence was that that winter found them with but 2 queens in the hive—one in each opposite corner,

I forgot to mention that the hive was made double-walled all through, with a one-inch space between walls.

I placed the empty super on top, filled with chaff, and left them. Both colonies wintered through until spring, but were evidently weakened badly, for they dwindled rapidly in the spring, and by April both were dead. Since then I have used the hive simply to store combs containing choice cells, and find it a fine thing for this purpose. Throughout the summer, when I find a choice cell that I wish to save, I place it in one of these compartments, and soon have the hive filled with choice queens. Then, as I find inferior queens through the yard, I snap their heads off and replace with this new stock. Meantime, they are building up finely in the big hive, and when fall comes I have enough to make from 2 to 4 rousing colonies to go into the winter.



Hive With Super and Cover Complete.

Barryton, Mich.

Great Results from Shaking?

BY BARON M. LIEAWFUL.

It has been many months since I have had occasion to write to the "Old Reliable"—not since I was moved to let the Public know of the wonderful method practiced by Conscientious D. But keeping bees under that plan and rearing queens by running extra lives into them through their umbilical cords, have both become chestnutty, and so I hailed with delight the newly-found shaking system. There is something merry in the very name; it rather tends to set up a rhythmic motion of one's diaphragm just to listen to that name.

I have now practiced this system two years. Not only has it proved an undreamed-of success in the way of honey crops, but has opened up new fields of thought. One of those fields is centered around my dear old maternal grandfather. It is now plain to me why the dear old man was so successful with his bees. Farmers from miles around used to come to him to learn his methods of getting phenomenal yields of honey. They never learned—rather missed the very reason by ascribing wonder to the fact that he could get such results, suffering as he did with the *shaking palsy*.

The only disadvantage in the shaking-system is the labor element, an item not to be overlooked when one is getting along in years. To overcome this disadvantage I set all my inventive genius at work. At first I arranged my hives in rows, the fronts of the hives on pivots and the backs on eccentric cams. The cams were rotated by a small water-motor. It was found that one-half hour of 3 rotations to the second at sunrise, and 15 minutes of 2 rotations to the second at noon, brought out the best results. All colonies thus treated averaged 767 pounds for the season, against the 37 average of those not treated. This paid a splendid income from the money invested, especially as the water cost only 12 cents per 1000 gallons, and 1000 gallons very nearly did the work of one day.

I was envious, however, of my cousin Ananias who lived near the Cherryville trolley-line. Ananias's apiary is on a lot close to the trolley. The land is slightly boggy, though not wet at the surface. Every passing trolley causes the ground to shake for a hundred yards, especially when a car is well-loaded and has a flat wheel. All the cars on this line are flat-wheeled, by the way, because it is a one-horse affair which buys second-hand cars. Four cars per day pass, six on Sundays. Ananias says that his bees averaged nearly half again as great a gain on Sundays as they did on week-days. Along towards August Ananias heard that the company was going to buy new cars, because the had done so well that season. Well, Ananias, who is a stock-holder, got a few of the officials up to his house, and after talking persuaded them to pay a dividend instead, seeing no dividend had ever been paid. How long his good luck will continue, I don't know.

I had a grand idea come last spring, though, when I read about that chap who hitches a vacuum pump to the middle of his combs. Why not go him one better and extract the honey automatically? Previous to this time I had not shaken during the busy day-hours except at a slower speed for a few minutes after dinner. The newly gathered nectar, after an hour or so of work, caused trouble by shaking from the combs. Then it occurred to me that I might make use of this very difficulty. It was, you will perceive, a blessing in disguise, just as was the disease of my sainted ancestor.

Little tin troughs were prepared and attached to the frames and carried to a common trough which led down the slope to my honey-tank. I now arranged an automatic device which would bring on a 4-rotation-to-the-second speed every 20 minutes, to be kept up 6 minutes. In this way the accumulated nectar was shaken from the frames and trickled merrily down to the tank. The frequent stimulus to the bees, and the ever-ready combs caused an immediate break in my records. The daily run jumped from 35 pounds per colony to 53, a most interesting reversal of the figures.

Do not for a moment think that I failed to recognize that this nectar was insufficiently cured. After the machinery was in good working order my only work all summer was the running of my automatic honey-curer, and my automatic 5-gallon can-filler. My work consisted in driving the loads of honey to the depot and making out shipping receipts, not to mention a little other clerical work.

I hesitate to make public these shaky results, for I fear that so many friends of the American Bee Journal will immediately start similar apiarian plants and cause a glut in the honey market. Since I have succeeded in getting this machinery to run without a hitch, I find that I can produce honey at 3 mills per pound, and it is on the strength of this fact alone that I venture to publish this story of my astonishing success.

There is still one problem which I am unable to fathom. If shaking brings such incredible results, why shouldn't the shaking palsy which afflicts bees also prove beneficial? I am planning, another season, to experiment along this line, and trust, through the discovery of the proper serum, to get something with which we can inoculate our queens, and thereby bring about a perfectly natural shake.

Ananiasville, New England.

Making Progress in Bee-culture

Read before the Connecticut Bee-Keepers' Association

BY ARTHUR C. MILLER.

The successful progress with bees has been largely a matter of management or manipulation. The oldest records indicate a large dependence on sundry operations. All manners and sorts of hives and appliances, designed to facilitate different manipulations, have been offered, urged and forgotten, only to be followed by more. With the advent of the bees from Italy about 1860, attention was called to the fact that bees varied in temperament and abilities, but beyond the continued importation of queens from Italy, and later the introduction of other races, very little has been done in the way of developing the bee. Here and there some bee-keeper has made some cross-mating, or selected for color, and now and then some more progressive or inquisitive man has made long-continued effort to breed an improved strain. But scarcely without exception all have leaned heavily on pet theories of manipulation to secure results in honey.

As illustrative, consider the frequent enlarging and contracting of entrances, transposing brood, stimulative feeding, etc., for getting colonies ready for the harvest. And then there are the sundry expedients for persuading the bees to enter the supers, to keep them at work and prevent them from swarming.

All this is but the following in the footsteps of the ancient bee-keepers, due largely to man's natural tendencies, much to the exploitation of devices and implements by the supply manufacturers, and perhaps quite as much to the supposed difficulty of breeding bees up to any high standard.

Occasionally some one has urged the keeping of more bees, and doing less fussing with them, and such advice is good, but it does not go far enough.

Perhaps I can best show you how to lessen manipulation, increase your crops, make certain the business, and put yourselves in the line of progress by relating a few of the habits of the bees, the factors governing their well-being, and relate to you some of the results of my efforts to produce a "thoroughbred" bee.

Like all the rest of animal life the bee seeks physical comfort. Food, warmth, dryness, are the essentials of its well-being. In the search for its food the sense of smell plays the chief part, and in very much of its activity the bee "follows its nose." In any shelter which will protect them from moisture, the bees, with sufficient food, will keep themselves warm. Warmth is the second great essential in its life, but, as you will later see, man's efforts to help the bee to keep warm often do more harm than good. To keep dry, the bee endeavors to cement up every crack and crevice. It is to keep in the heat, that the bee uses the propolis.

When brood-rearing is progressing rapidly the bees spread over all the comb-surface they can cover and still keep comfortable. It is not intelligence, but warmth, which governs. But when brood-rearing is small, and outside temperature low, the bees cluster closely and keep warm. But note, the air around the cluster is practically not affected by the temperature of the bees. Bear that fact in mind when you pack your bees in a thick-walled, chaff-packed hive. Your bees would be better off in winter, wrapped in a sheet of waterproof paper.

In the winter the thick walls keep them cold, not warm; and often prevent the escape of moisture, particularly with a small entrance. In the spring and fall, and in cool summer nights, common in some places, the thick hives are a help. but simpler and cheaper devices answer as well, or better.

To keep dry, the bee at all times wants plenty of air. In the winter, help it by giving all the entrance possible. I would rather have no floor on my hives than to have the entrances reduced to two inches by one-half inch, as is a common practice. In the winter the bee is dependent upon the sun and natural air movements for keeping dry, but in the warmer seasons it controls the air-currents to such an extent of giving "more than enough" in winter and summer, but in spring and fall reducing it to "not enough." The reasons for a reduction at such times are that, in the spring, a relatively small force of bees is trying to care for a large surface of brood, and incidentally much heat is escaping from them. In the fall, decreasing force is trying to keep warm, and ripen and seal its stores, which are much spread out, hence heat escapes.

In the height of the harvest a large force is generating much heat, is throwing off much moisture, and must have a large opening for ventilation, therefore, the wide open entrance, say 18 inches by one inch.

But properly to conduct their work, bees must be kept warm, and as the night advances they lessen or stop their fanning. If the temperature of the air drops they gather more and more compactly, finally, perhaps, leaving the supers and clustering closely on the brood. If you understand the law of wax-production, you will see the loss. Protection then by means of a double wall or wrapping pays.

It is not generally known that bees sleep, perhaps not just in the sense that we do, but still it is a condition of absolute stillness. Individually bees may be found sleeping at almost any time, but the whole colony goes to sleep about midnight, and. sleeps till about 3 a.m. This is in June. Let them sleep in the supers. It will pay.

With a proper condition of bees of a suitable strain, the only thing which can be called "manipulation" in the foregoing is control of the entrance done with a plain stick of wood, used once in the fall.

I have cut the manipulation to a minimum, but I have based it on a proper hive and on "proper condition of bees." I know that you have been soundly instructed in hives by your able president, Mr. Latham, so I will at once take up the subject of the bees.

The great consideration is to have all colonies uniform at all times; but how many men reach such ideal conditions? They can be reached, and easily, too. The chief essentials are to have all colonies with queens of the same age and same breeding. The first half is easy; the second is not, unless you will train yourselves to study the bee so carefully that you can tell beyond a reasonable doubt just how your queens have mated. Now, I do not mean, to see if the workers have three bands, but that all queens are mated to drones of one particular queen. That is possible and not very difficult if you care to apply yourself. It means that you must learn to see many things besides stripes. You must recognize color tints, hair color and density, shape, extent of excitability, reaction to smoke, etc. I have in mind three strains of Italians, two of them the result of careful selection extending over many years, the other of but three years standing. The first two are of the dark type, and the last of the golden. No matter how they mate up, it is always possible to determine the cross. The golden always gives a color to the underside of the abdomens; one of the darks has a particular shape, and habit of action, together with a superabundance of white hair, which are always stamped plainly on its progeny; and the other dark has a pink tint which seems indelible.

But you need not go so far, though that will pay, and the thorough-breeder must do that, and more. Select as a queen-mother one whose workers possess the traits you want, and use her as long as she lives. Take the one of her queen daughters which produces the largest and most uniformily marked drones as a drone-mother, and force her to drone-production, and for such purpose combs not over half-drone are better than those all drone-cells.

By taking away combs of drone-brood about as soon as all eggs are hatched, and giving them to queenless colonies, or placing them above an excluder over a strong colony, and giving an upper entrance, it is easy to secure ten to twenty thousand drones.

By suppressing all other drones in the apiary, desired matings are about always certain.

The next step is to rear all queens at as near the same time as possible, and rear twice as many as you need. Keep these in nuclei until well tested, say 6 weeks from the time they begin to lay. Select the best and requeen every colony, saving only the two breeding queens. I find the best time to requeen is from the middle to last of August.

If you have worked with a good strain of bees, and have selected intelligently, you will find that your colonies will be marvelously uniform, strong for fall and winter, big and ready for the earliest spring harvest, not given to swarming, and yielding returns away above any average you have been accustomed to.

And they will do it all without manipulation. The brood-nest is not touched except to remove the old queens, the new ones being run in at the same time, and beginning their duties within 5 minutes. Putting on and removing supers are not classed as manipulations, and the slight attention to the entrance, twice in spring—once to contract and once to enlarge—and the same in the fall, is hardly worthy to be so called.

The future progress of apiculture lies in developing the bee by careful breeding, and the possibilities which lie therein, I believe to be beyond anything we have dreamed of. Already I have and you can do as much, or more, if you will.

Providence, R. I.

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Miscellaneous News.

(Continued from page 315.)

Bee-Culture and the Government

The following shows what has been done in the interest of bee-keeping by the Department of Agriculture at Washington—it is a fine exhibit:

U. S. DEPARTMENT OF AGRICULTURE.
BUREAU OF ENTOMOLOGY.
BEE-CULTURE. Washington, D. C.

The following publications relating to bee-culture, prepared in the Bureau of Entomology, are for free distribution, and may be obtained by addressing the Secretary of Agriculture: Farmers' Bulletin No. 397, "Bees." By E. F. Phillips, Ph.D. 1910. 44 pp. A general account of the management of bees.

[Farmers' Bulletin No. 59, "Bee-Keeping." has been discontinued.]

Circular No. 79, "The Brood Diseases of Bees." By E. F. Phillips, Ph. D. 1906. 5 pp.

This publication gives briefly the symptoms of the various brood diseases, with directions for treatment.

Circular No. 94, "The Cause of American Foul Brood." By G. F. White, Ph. D. 1907. 4 pp.

This publication contains a brief account of the investigations which demonstrated for the first time the cause of one of the brood diseases of bees, American foul brood

The following publications are not for free distribution, but may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., at the prices indicated. All remittances should be made payable to him, and not to the Department of Agriculture, and should be sent by postal money order or by New York exchange. If currency is sent it is at the sender's risk; such remittances, however, usually arrive safely. STAMPS, PERSONAL CHECKS, OR FOREIGN MONEY WILL NOT BE ACCEPTED IN ANY CASE.

BUREAU OF ENTOMOLOGY.

Bulletin No. 1, "The Honey Bee." By Frank Benton. 1899. 118 pp.

[This bulletin has been discontinued, owing to the fact that later investigations have shown the error of certain portions which, when the bulletin was prepared, were generally accepted as correct. The subjects treated are discussed in the various later publications of the Bureau.]

Bulletin No. 55, "The Rearing of Queen-Bees." By E. F. Phillips, Ph. D. 1905. 32 pp. 17 figs. Price 5c.

A general account of the methods used in queen-rearing. Several methods are given so that the bee-keeper may choose those best suited to his individual needs.

Bulletin No. 70, "Report of the Meeting of Inspectors of Apiaries, San Antonio, Tex., Nov. 12, 1906." 1907. 79 pp., 1 plate. Price 15c.

Contains an account of the history of bee-disease investigations, the relationship of bacteria to bee-diseases, and a discussion of treatment by various inspectors of apiaries and other practical bee-keepers who are familiar with diseases of bees.

Bulletin No. 75, Part I, Production and Care of Extracted Honey." By E. F. Phillips, Ph. D "Methods of Honey Testing for Bee-Keepers." By C. A. Browne, Ph. D. 1907. 18 pp. Price 5c.

The methods of producing extracted honey with special reference to the care of honey after it is taken from the bees so that its value may not be decreased by improper handling. The second portion of the publication gives some simple tests for adulteration.

Bulletin No. 75, Part II, "Wax-Moths and American Foul Brood." By E. F. Phillips, Ph. D. 1907. Pp. 19–22, 3 plates. Price 5c.

An account of the behavior of the two species of wax-moths on combs containing American foul brood, showing that moths do not clean up the disease-carrying scales.

Bulletin No. 75, Part III, "Bee-Diseases in Massachusetts." By Burton N. Gates. 1908. Pp. 23–32, map. Price 5c.

An account of the distribution of the brood diseases of bees in the State, with brief directions for controlling them.

Bulletin No. 75, Part IV, "The Relation of the Etiology (Cause) of Bee-Diseases to the Treatment." By G. F. White, Ph. D. 1908. Pp. 33–42. Price 5c.

The necessity for a knowledge of the cause of bee-diseases before rational treatment is possible is pointed out. The present state of our knowledge of the causes of disease is summarized.

Bulletin No. 75, Part V, "A Brief Survey of Hawaiian Bee-Keeping." By E. F. Phillips. Ph. D. 1909. Pp. 43-58, 6 plates. Price 15c.

An account of the bee-keeping methods used in a tropical country and a comparison with mainland conditions. Some new manipulations are recommended.

Bulletin No. 75, Part VI, "The Status of Apiculture in the United States." By E. F. Phillips, Ph. D. 1909. Pp. 59–80. Price 5c.

A survey of present-day bee-keeping in the United States, with suggestions as to the work yet to be done before apiculture will have reached its fullest development.

Bulletin No. 75, Part VII, "Bee-Keeping in Massachusetts. By Burton N. Gates. 1909. Pp. 81–109. Price 5c.

An account of a detailed study of the apicultural conditions in Massachusetts. The object of this paper is to find out what are the actual conditions and needs of bee-keeping in New England.

Bulletin No. 75 (7 parts). A table of contents and index to the entire bulletin will be issued soon, after which the seven parts with contents and index will be published under one cover.

Technical Series, No. 14, "The Bacteria of the Apiary, with Special Reference to Bee-Diseases." By G. F. White, Ph. D. 1906. 50 pp. Price 10c.

A technical study of the bacteria found under normal conditions, with special attention to those found in diseased brood.

Technical Series No. 18, "The Anatomy of the Honey-Bee." By R. E. Snodgrass. 1909. 162 pp, 57 text figures. Price 20c.

An account of the structure of the bee, with technical terms omitted as far as possible. Practically all of the illustrations are new, and the various parts are interpreted according to the best usage in comparative anatomy of insects. A brief discussion of the physiology of the various organs is included.

BUREAU OF CHEMISTRY.

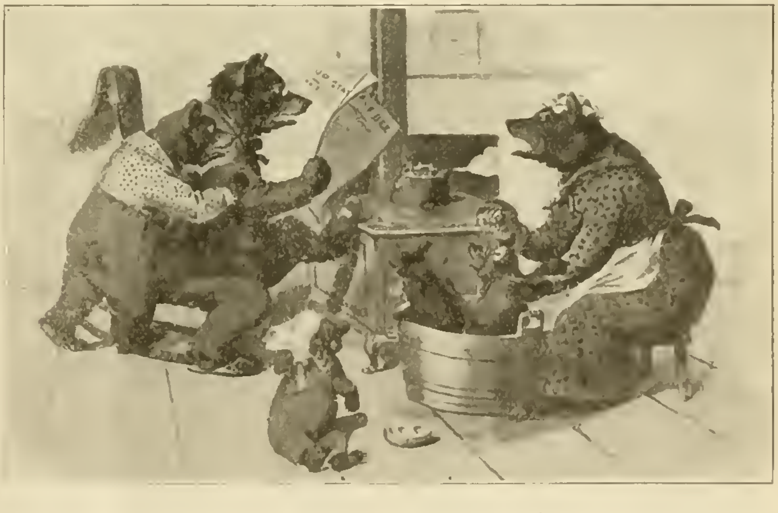
Bulletin No. 110, "Chemical Analysis and Compostion of American Honeys." By C. A. Browne. Including "A Microscopical Study of Honey Pollen." By W. J. Young. 1908. 93 pp. Price 30c.

A very comprehensive study of the chemical composition of American honeys. This publication is technical in nature, and will perhaps be little used by practical bee-keepers, but it is an important contribution to apicultural literature. By means of this work the detection of honey adulteration is much aided.

Applications for the following publication may be addressed to the Secretary of Apiculture:

HAWAII AGRICULTURAL EXPERIMENT STATION, HONOLULU, HAWAII.

Bulletin No. 17, "Hawaiian Honeys." By D



FATHER BRUIN (reading).—"'Another strike threatened. The *Amalgamated Union of Honey and Wax Workers* have declared for a 12-hour instead of an 8-hour day. Unless the flowers agree hereafter to remain open long enough for the Union to work 12 hours per day, the Amalgamated Union of Honey and Wax Workers have decided to strike. Consumers who haven't a good supply of honey on hand had better secure it at once, as the prospects of a new crop this season are very slight.'"—*St. Nicholas.*

> L. Van Dine and Alice R. Thompson. 1908. 21 pp., 1 plate.
>
> A study of the source and composition of the honeys of Hawaii. The peculiar conditions found on these islands are dealt with.
>
> The apicultural investigations of the Bureau of Entomology comprise several distinct lines of work, and the results are published when completed. Announcement of the new publications is generally made in the journals devoted to bee-keeping and new lists similar to this will be published from time to time.
>
> The Bureau is pleased to give every aid possible to those interested in bee-keeping by answering questions which may arise. The earnest co-operation of the bee-keeping public is solicited. Respectfully,
>
> L. O. HOWARD, *Chief of Bureau.*

Surely, the foregoing is an encouraging showing. We were surprised when we received the above, printed on a large postal card. Bee-keepers everywhere should avail themselves of any or all of the above list of very helpful publications.

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What Darkens Honey-Dew?

Honey-dew being a live topic this year, here is something instructive from D. M. Macdonald, which appears in the British Bee Journal:

> Not that all honey-dew is so very bad, for there are at least two kinds of it, differing considerably in composition. One is a saccharine juice, which exudes under certain climatic conditions from the leaves of various trees, amongst them being oak, chestnut, lime, beech, ash, conifers, and fruit trees. Now, as is well known, there visits these "sweating" leaves an aphis which feeds greedily on this sweet substance. It, like the bee, has something in the nature of a honey sac, quite separate from its ordinary stomach, from which, when the sac gets overcharged, it regurgitates, or rejects, "aphidian honey" by means of two tubes used for *no other* purpose, fortunately for the bees and their keepers.
>
> In itself this fluid, which is a secretion, *not* an excretion, would not be wholly unpalatable. It looks like a bright, sparkling, clear drop of liquid when held up against the light, and tastes by no means harsh. But, unfortunately, a soot fungus grows on the leaves, making them appear as if they had been coated with this substance. To the sorrow of the bee-keeper and to his serious loss, this gives a black, inky appearance to the saccharine matter when it is gathered and consigned to the cells, and when extracted it looks dark and muddy, sometimes resembling in color blacking or coal-tar. Much of it in the admixture thoroughly injures the sale of the honey, and even a little of it goes far to deteriorate the quality and flavor.

◆

Reduced Rates to Albany

We have received information from Vice-President W. D. Wright, that a fare and three-fifths on the certificate plan for the National convention at Albany has been secured within certain limits, and provided there are 100 persons present who have railroad certificates, and who have paid 75 cents or more for their fare to Albany.

Tickets at the regular full one-way first-class fare for the going journey may be secured from Oct. 8th to 11th inclusive. Be sure that when purchasing your going ticket you request a certificate. *Do not make the mistake of asking for a receipt.*

Certificates are not kept at all stations. If not obtainable at your home station, the agent will inform you at what station they can be obtained. In such places you can purchase a local ticket thence, and from there purchase a full ticket, and secure the certificate, to place of meeting. Immediately on arrival at the meeting present your certificates for indorsement.

A special agent of the Trunk Line Association will be in attendance Oct. 13 from 9 a.m. to the close of the convention, to validate certificates. A fee of 25 cents will be charged at the meeting for each certificate validated. All certificates must be validated, and there must be not less than 100 persons having regularly issued certificates, obtained from ticket agents at the starting point showing payment of a regular full one-way, first-class fare of not less than 75 cents on going journey. Your validated certificate will be authority for three-fifths fare returning up to and including Oct. 17.

From stations from which it is possible to reach Albany by noon of Oct. 13th, tickets may also be sold for morning trains of that date. *All* who have to pay 75 cents or more for fare are requested to get a certificate one way, which will help to get the required number.

The reduction is from Trunk Line and Central Passenger Association Territory as follows:

RAILROADS IN TRUNK LINE ASSOCIATION.

Baltimore & Ohio R. R. (Pittsburg, Bellaire, Wheeling, Parkersburg, Kenova and east thereof.)
Baltimore Steam Packet Co.
Buffalo & Susquehanna Ry.
Buffalo, Rochester & Pittsburg Ry.
Central Railroad of New Jersey.
Chesapeake & Ohio Ry. (Kenova, W. Va., and east thereof).
Chesapeake Steamship Co.
Cumberland Valley R. R.
Delaware & Hudson Co.
Delaware, Lackawanna & Western R. R.
Erie R. R. (Buffalo, Suspension Bridge, Dunkirk, Salamanca, and east thereof).
Chautauqua Traction Co.
Fonda, Johnstown & Gloversville R. R.
Jamestown, Chautauqua & Lake Erie Ry.
Lehigh Valley R. R.
New York Central & Hudson River R. R.
New York, Philadelphia & Norfolk R. R.
Norfolk & Washington Steamboat Co.
Pennsylvania R. R.
Philadelphia & Reading Ry.
Pittsburg, Shawmut & Northern R. R.
Western Maryland R. R.
West Shore R. R.

ROADS IN CENTRAL PASSENGER ASSOCIATION

Ann Arbor R. R.
Baltimore & Ohio R. R.
Baltimore & Ohio Southwestern R. R.
Bessemer & Lake Erie R. R.
Chesapeake & Ohio Ry.
Chesapeake & Ohio Ry. Co. of Indiana.
Chicago & Alton R. R.
Chicago & Eastern Illinois R. R.
Chicago, Indianapolis & Louisville Ry.
Chicago, Indiana & Southern R. R.
Chicago, Peoria & St. Louis Ry.
Cincinnati & Muskingum Valley R. R Co.
Cincinnati, Hamilton & Dayton Ry.
Cincinnati Northern R. R.
Cleveland, Akron & Columbus Ry. Co.
Cleveland, Cincinnati, Chicago & St. Louis Ry.
Dayton & Union R. R.
Detroit & Mackinac Ry.
Detroit, Toledo & Ironton Ry.
Dunkirk, Allegheny Valley & Pittsburg R. R.
Erie R. R.
Evansville & Indianapolis R. R.
Evansville & Terre Haute R. R.
Ft. Wayne, Cincinnati & Louisville R. R.
Grand Rapids & Indiana Ry.
Grand Trunk Ry. System.
Hocking Valley Ry.
Iowa Central Ry.
Kanawha & Michigan Ry.
Lake Erie, Alliance & Wheeling R. R.
Lake Erie & Western R. R.
Lake Shore & Michigan Southern Ry.
Louisville & Nashville R. R.
Louisville, Henderson & St. Louis R. R.
Marietta, Columbus & Cleveland R. R.
Michigan Central R. R.
Minneapolis & St. Louis R. R.
Mobile & Ohio R. R.
New York, Chicago & St. Louis R. R.
Norfolk & Western Ry.
Northern Ohio Ry.
Pennsylvania Company.
Pere Marquette R. R.
Pittsburg & Lake Erie R. R.
Pittsburg, Cincinnati, Chicago & St. Louis Ry.
Southern Ry.
Toledo & Ohio Central Ry.
Toledo, St. Louis & Western R. R.
Vandalia R. R. Co.
Wabash R. R.
Wabash Pittsburg Terminal Ry.
Wheeling & Lake Erie R. R.
Zanesville & Western Ry.

We also *expect* the reduction to be effective in the following territory, viz.: New England, Eastern Canada, Territory west of Buffalo and Pittsburg to Denver and Cheyenne, and north of the Ohio River; Cairo, Ill., St. Louis, Kansas City, and Indian Territory and Oklahoma.

A FEW FACTS ABOUT ALBANY.

Albany is the oldest surviving settlement in the 13 original States, and was founded in 1614 by the Dutch traders who followed the voyage of the discoverer of the Hudson River. It was known successively as Fort Nassau, Beaverwyck and Williamstadt, and was protected from incursions of the Indians by a stockade and a moat.

In 1623 the West Indian Company built Fort Orange (Aurania) on Capitol Hill, and the village became the center of the fur trade in North America. In 1664 it was transferred to the British, and the name was changed to Albany, in honor of the Duke of York and Albany, afterward James II. It received its charter in 1686, and became the capitol of the State in 1797. The first general Congress, at which plans for colonial federation were discussed, was held in Albany in 1754. "Yankee Doodle" was written in the garden of the historic manor house now known as Fort Cralo, which is still standing on the east bank of the Hudson opposite Albany.

Besides its antiquity, there are many other things about the city that are interesting to tourists; notably its $25,000,000 Capitol Building, the $4,000,000 State Educational Building in course of erection, many beautiful bank buildings, etc.

◆

The Illinois State Convention

The 20th annual session of the Illinois State Bee-Keepers' Association will be held at the State House, Thursday and Friday, Nov. 17 and 18, 1910.

We expect to have a number of the most prominent bee-keepers of the State, among them our worthy president, Mr. C. P. Dadant, as well as others outside our own State.

Among the other things that will be on the program will be the report of our foul brood inspector, A L. Kildow, of Putnam, Ill., who will show on a map all the counties of the State wherein foul brood exists, as far as discovered.

Regarding hotel and railroad rates, a notice will be sent to all the members of the Association not later than Nov. 1st. To any not members, who wish to attend the convention, if they will notify the secretary, a like notice will be sent to them. Make up your mind to come and have a good time.

JAS. A. STONE, *Sec.*
Rt. 4, Springfield, Ill.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
DR. C. C. MILLER, MARENGO, ILL.
He does NOT answer bee-keeping questions by mail.

Introducing Queens—Feeding Nucleus

1. Is a Banat, Caucasian, or a Cyprian queen any harder to introduce than an Italian?

2. I bought a 3-frame nucleus; would it be all right for winter if fed?

NEW YORK.

ANSWERS.—1. I think not.

2. Rather doubtful; although in the right kind of a cellar it might succeed.

American Foul Brood.

My bees are not doing very well. They have the American foul brood. What must I do to cure it? Some take the bees from the old hive and put them into a new one, and then disinfect the hive; but what they use to disinfect with, I don't know.

PENNSYLVANIA.

ANSWER.—There is probably nothing better than the McEvoy treatment. If you send to Dr. E. F. Phillips, Dept. of Agriculture, Washington, D. C., he will send you a free bulletin about the disease and its cure. Some disinfect the hive by throwing a handful of straw into the empty hive and burning it out; some wet with kerosene the inside and burn it; and some use a painter's torch. Probably the greater number do nothing at all in the way of disinfecting the hive, believing it unnecessary.

Metal Queen-Cell Bases.

Has anybody ever used metal queen-cell bases? If so, why are they not in more general use? I have used some this season in an experimental way, and like them very much. They have so many advantages over others; there is no transferring of the larvæ, no royal jelly to be obtained; they are strong and can be used over and over again, etc.; in fact, they have the advantages of all the others, with few of their disadvantages.

IOWA.

ANSWER.—I do not remember to have heard of metal being used, although wood is in common use. Wood has the advantage of being a poorer conductor of heat than metal, and it is likely that no one has thought of metal having any advantage over wood.

Sowing Yellow Sweet Clover Seed.

1. When is the best time to sow yellow sweet clover seed, and how shall I prepare the ground? I want to sow where I have corn.

2. How many pounds of seed to the acre?

TENNESSEE.

ANSWERS.—1. Either the white or the yellow variety of sweet clover may be sown spring or fall, or at the same time other clover is sown in your locality. It doesn't matter a great deal as to preparation of the ground. Prepared as for other clover will be all right, only the ground should be rolled down hard after sowing, as it seems to heave worse in winter than red clover. In your corn ground you may get as good a stand as any other way by sowing without any preparation whatever, at a time when the ground is rather wet, and allowing a lot of stock to tramp it down all over. That seems like a slipshod way of doing things, but the worse you treat sweet clover the better it seems to succeed. The fact is, it is not the easiest thing to get a good stand when ground is very nicely prepared—at least not in this locality.

2. There is no definite agreement as to the amount of seed per acre, but much lighter seeding will do than for other clovers, as a single stalk will cover more than a square foot of ground. If it all grows, 10 pounds to the acre ought to be a great plenty.

Grading Honey for Market.

1. You answered my questions on page 292, on grading honey, and selling honey on commission. What I want to know is, Are all the sections in a case of 24 sections of equal weight, or do they run from 13½ to 16 ounces in the case? I have been weighing all sections and putting all of the 16-ounce sections in a case by themselves; the same way with 15-ounce, 14, 13 and 12. Any under 12 ounces are put back to be filled out, if it is not too late in the season; and if some of the cells of the 14, 13 and 12 are not capped over I put them back. As I understand the grading rules, some of the customers get a 13½-ounce section for 16 cents, while others of the same case get a 16-ounce sections for 16 cents. I try to fix it so all will be treated alike.

NEW YORK.

ANSWER.—In a case of sections there are different weights, and the sections may run up to 16 ounces each, or more; only so that no section shall weigh less than 13½ ounces, and that the cases shall average not less than 21 pounds each. If the grocer sells the sections by weight, of course the consumer pays for the number of ounces he gets; if the honey is sold by the section, then some customers will get better bargains than others.

Soured Honey—Short of Winter Stores.

1. I took off 300 pounds of honey, Aug. 20, which seemed to be nice honey, yellow color, good taste, and all sealed up nicely. I stored it in a warm room, and now it is fermenting, running out through the cappings, and is beginning to have quite a sour taste. Today I am putting it back on the hives to see if the bees can put it in shape. What would you advise me to do with it? What caused it? I do not believe it is honey-dew.

2. My bees are all in Danzenbaker hives, and are working in the supers yet, but it looks as if they did not have enough stores below to winter on. Do you believe there is any danger of their giving a surplus and not providing for themselves?

MISSOURI.

ANSWERS.—1. I don't know what was the trouble. Sometimes bees seal up honey when it is not sufficiently ripened, and that might have occurred in your case. The character of the honey must have had something to do with it. Probably you did the very best thing when you gave it back to the bees.

2. If there is no fall flow, and the early flow stops short while the frames are full of brood, there may be too little honey in the hive for winter, ecpecially in 8-frame hives or smaller. But if there is a fall flow, the bees are sure to crowd honey into the brood-chamber, even if it leaves no room for the queen. At least that is the way it is here. As your bees were working in supers Sept. 14, if you had looked in the brood-chamber on that date I'm pretty sure you would have found lots of honey and not much brood.

Getting Bees from Bee-Trees—Albino Bees.

1. At a distance of about 7 miles from where I live, on the banks of a river, there are, perhaps, hundreds of bee-trees. The bees can easily be gotten out. But to get some of them it would take a whole day, as the bees have their entrance 1 or 2 inches above the ground and run down into the roots, so that I would have to dig up the whole tree, and some of these trees are very large. How could they be gotten out without the use of some kind of an escape?

2. Please explain one or more ways in which bees may be taken out of a tree without the use of smoke.

3. Could one by chopping a hole about the end of the combs (lower end), and setting a cup of gasoline up close to the combs, drive out all of the bees, no matter in what direction the holes run?

4. In my bee-book I never found anything stating the difference between an albino and another race of bees. Is there anything peculiar about them?

5. Do they gather much? Where could I buy such a queen? My bees are golden Italians, and those in the trees are golden also.

CALIFORNIA.

ANSWERS.—1. Try this: Put in your smoker rags saturated with carbolic acid; blow into the hole the vapor lightly at first, so as not to stupefy the bees, and continue until they think it is pleasanter outside.

2. Besides smoke or some other vapor objectionable to the bees, I don't think of any other way except chopping or using an escape.

3. I'm afraid that merely setting a cup of gasoline there might not trouble the bees enough. Blowing it in with a smoker might do better.

4. If I am rightly informed, albinos among bees are somewhat like albinos of the human race or other animals: there is a deficiency of coloring pigment. This is accompanied by weakness in other respects; although some have reported albino bees that were said to be good. I have seen nothing about albinos for several years, and don't know where you would find them.

Reports and Experiences

Report for Two Seasons.

I am very thankful for the Bee Journal. It has been a great help to me during the summer. I bought 2 colonies of bees in fall of 1908. They wintered all right, but 1909 was a poor year. They increased to 4 colonies and produced not more than 6 pounds of honey. This year I increased to 16 colonies from the 4 and got between 300 and 400 pounds of comb honey. Some swarms united and went to the woods.

Bagley, Minn. ALGOT BERNTSON.

Freaky 1910 in Central Nebraska.

March was summer; April and May winter; June cold spring; and July hot and dry (only ½ inch of precipitation for the month.) With a small working force of bees, and the nectar drying so fast, the flow from alfalfa and sweet clover was slow, but now we are getting a favorable freak finish to the season. August has been cool and showery, and the low places are a jungle of Spanish-needle (first time I've seen it here in 6 years). We are getting a fine fall flow. I expect 1500 pounds of honey or better, which means a 60-pound average per colony.

LOUIS MACEY.

N. Platte, Nebr., Sept. 7.

Score Another for the Blacks.

When I hear men bragging about black bees, I think of our boss in the lumber-woods. He was always telling the boys of the good qualities of his wife. He had so much to say in praise of her that I made a long, lonely walk through the woods to see his home and his wife.

She was a "nigger!" W. H. MILLS.

Arden, Nebr., Sept. 5.

Ripening Honey.

That little air space at the top of every cell of honey as it is in the comb is of particular need. Immediately resting on the honey is an albuminous film. The rising and falling of the temperature causes a waste of a portion of the honey which passes off as carbonic acid gas. The gas passes through the film first and then as the wax cap of the cell is dry the gas can work its way through into the outer atmosphere. If the honey rested against the wax capping the gas could not get through and the refuse would be retained in the honey, and the honey would be spoiled.

If honey is sealed up in air-tight cans or jars for but a short time it is correspondingly injured. When the containers of the honey are kept in an airy room and provided with ventilated covers a film forms on the surface protecting it from the air, but the ripening process goes on, indefinitely. Such honey when dished out is dry and thick. But where the honey has been sealed up the film is absent, and the honey is thinner, and absorbs moisture from the air at a rapid rate.

Chatsworth, Calif. C. W. Dayton.

Italian Bees vs. Blacks.

Of late, we have taken a great deal of interest in the different accounts about the Italian and black bees, so we are sending an account of our experience.

We have been in and around the bee-business, more or less, for the last 6 years, and have had Italians, hybrids and blacks. With us the Italians came out ahead in the long run, every time. A few of their superior qualities are: Honey-gathering, less inclined to swarm, and in better condition in spring.

A point in favor of the blacks is that the queen does not lay eggs in the super as the Italians are liable to, at least not with us. But, there is another desirable trait, and this is due to the prolificness of the queen, and, at the same time, it can be easily overcome by the use of 2 brood-chambers, or an excluder. We use the 4x5 sections, and have them about half filled with foundation. The remaining half was built mostly for drone-comb, which offered a place for the queen to lay those undesirable eggs. We do not doubt that in a good honey-flow near home, as in the case with sweet clover, no strain or variety of bees can surpass the pure blacks, but, when the harvest begins to wane, when the nectar must be sought far and wide, then the Italians are "on the job." They hang on while the blacks do practically nothing.

We all know ot the wealth of nectar secreted by the common red clover, but, except when the tubes are shortened by drouth, or some other reason, it is not available for the bees. Black bees have shorter tongues than the Italians have, and, if you see them on red clover, it is more of an exception than the rule.

Our flow at present consists of buckwheat and second-growth red clover. In going to the bee-yard in the early morning when the bees are working on buckwheat, we find the blacks flying fairly well, but do not come up to the Italians. In going to the yard on a clear day after 10 o'clock, we find the Italians flying at about the same rate, while the blacks barely do anything. At this time, in going to the buckwheat pasture, we see no Italians at work at all, and what little we see are blacks, but on going to the clover fields, we find it just buzzing and alive with bees, mostly or nearly all Italians.

On examination of the hives, we find more or less dark buckwheat honey and some honey-dew (if there is any to be gathered) with the blacks, and with the Italians a good surplus of red clover mixed more or less with buckwheat, but not to so large an extent as to injure the sales of the honey, as is the case with the honey taken from the blacks. We have a hard time to sell dark honey, as the people want too big a reduction for it, so this is quite an item.

All things considered, the Italians seem to be the best bees for this country.

Lititz, Pa. Snavely Bros.

Tolerably Good Season.

Barring the unfavorable spring, the honey season in this locality was tolerably good. To date I have extracted 300 pounds of honey from 4 colonies, and increased to 6. I had but one natural swarm. There is still some honey in the hives, and the bees are in an excellent condition; plenty of brood in all stages; The honey in this locality has a greenish tinge, but the body and flavor are good. I sell 3 pounds for 50 cents.

I find the ordinary Italians superior to the goldens. Albin Platz.

Cincinnati, Ohio, Aug. 31.

Italians vs. Black Bees.

Having had an experience of nearly 50 years with Italian bees, and having been acquainted with the blacks more than 75 years, I think I know something of the difference between the two races, that seem to be unalterably fixed.

For instance, .in handling Italian bees, they hold their position on the combs, while the blacks scamper to the bottom of the frame, clustering in knots of both young and old bees, and drop off at the feet of the person handling them. Many of the young bees never get back into the hive and must become a loss, except that the operator picks up and returns them to the hive, which he is not at all likely to do.

Then, again, during all the years that I have handled the Italians, I have never had a colony to fall a victim to the ravages of the bee-moth, while it is a fact that the moth often invade and completely destroy a colony of blacks. In fact, unless a colony of Italians become reduced to a mere nucleus, I never give the matter of their being hurt by the bee-moth any attention; but in the event of such a mishap, and the hive is full of comb, I at once take the precaution of reinforcing them with a frame of mature and emerging brood.

As regards the crossness of the two races, I have found but little difference, for I occasionally find a colony of Italians that are as cross as they can be, it seems to me. And, I also found the blacks no better. I have opened a hive of Italians perhaps twenty times in succession without veil, or smoke, without receiving a sting; and the next time I have received perhaps 50 stings before I could get away from them.

I have learned never to open a hive without a bee-hat on, and almost invariably have smoke at hand, and never have any trouble when this course is rigidly adhered to. However, I will except the Cyprian strain of bees, as I do not remember ever handling a colony of them that was not on the warpath; and smoke does not seem to subdue them for any considerable length of time, for as soon as the smoke would clear away, they would fall in line and seemingly attack me with renewed and increased fierceness.

In the matter of collecting and storing honey, I am not fully prepared to say definitely that the Italians excel the blacks very much, if any. It is claimed by some that the blacks seal their honey with whiter cappings than the Italians. I have never been able to note any real difference in the aggregate. However, I have seen the Italians cap their honey with whiter material, sometimes, than at other times. As to whether or not the blacks do so, I can't say having never given this feature of the subject any attention when I had blacks in my apiary.

I will recapitulate the only real points of difference in favor of the Italians that I have been able to note:

The Italians stand their ground on the combs when handling them, while the blacks run to the bottom of the combs and drop off on the ground at the operator's feet, thereby causing the loss of many bees.

Second, the Italians defend themselves much more successfully against the ravages of the bee-moth.

As I view the situation, these points of difference make it worth while to own the Italians in preference to the blacks.

Lyons, Kan. Dr. G. Bohrer.

Byer and the Other "Buckwheaters."

Friend York:—Please tell Mr. Byer that he is correct in his belief that Albany is located near the "buckwheaters," and if he will favor us with his presence at the National convention, he will find them out in full force. Although he says he is not partial to buckwheat, I think he will find the "buckwheaters" a very good class of people to meet.

Mr. Byer said in regard to the decision to hold the National Convention in Albany, "that is really too bad." I am sorry that he feels that way about it, and believe that if he will make the most of the opportunity, he may be able to change his mind. I believe it due to our Canadian brethren, that the National Convention be held in their Dominion in the near future, and I hope to see it brought about. W. D. Wright.

Altamont, N. Y.

[Mr. Byer writes that he expects to be at the Albany convention, all being well. We didn't think that he could stay away, buckwheat honey or no buckwheat honey.

Mr. L. C. Root, of Connecticut, the son-in-law of the lamented Moses Quinby, also intends to be present at the meeting. Better go, reader, if you can possibly do it.—Editor.]

Wanted —Old Combs and Slumgum. Will work it for half and pay 30 cents a pound for your share of wax. A. A Lyons,
8A12t Rt. 5, Box 88, Ft. Collins, Colo.
Please mention Am. Bee Journal when writing.

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We have 4 Souvenir Postal Cards of interest to bee-keepers. No. 1 is a Teddy Bear card, with stanza of poetry, a straw bee-hive, a jar and section of honey, etc. It is quite sentimental. No. 2 has the words and music of the song, "The Bee-Keeper's Lullaby;" No. 3, the words and music of "Buckwheat Cakes and Honey;" and No. 4, the words and music of "The Humming of the Bees." We send these cards, postpaid, as follows: 4 cards for 10 cents, 10 cards for 20 cents; or 10 cards with the American Bee Journal one year for $1.10. Send all orders to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.

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This book on bees is also known as the "Manual of the Apiary." It is instructive, interesting, and both practical and scientific. On the anatomy and physiology of the bee it is more complete than any other standard American bee-book. Also the part on honey-producing plants is exceptionally fine. Every bee-keeper should have it in his library. It has 544 pages, and 295 illustrations. Bound in cloth. Price, postpaid, $1.20; or with a year's subscription to the American Bee Journal—both for $1.90. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

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Have you anything to sell? Any bees, honey, hives, or anything else that you think the readers of the American Bee Journal might want to buy? If so, why not offer it through our advertising columns? See rates in the first column of the second page of every number of the Bee Journal. We try to keep our columns clean and free from any dishonest advertising.

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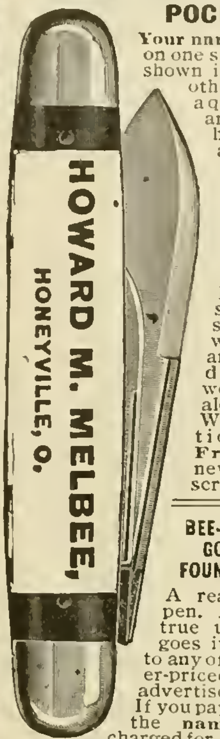

Your nnme and address put on one side of the handle as shown in cut, and on the other side pictures of a queen-bee, a worker, and a drone. The handle is celluloid and transparent, through which is seen your name. If you lose this knife it can be returned to you, or serves to identify you if you happen to be injured fatally, or are unconscious. Cut is exact size. Be sure to write exact name and address. Knife delivered in two weeks. Price of knife alone, postpaid, $1.25. With year's subscription, $1.90. **Free** for 3 new $1 subscriptions.

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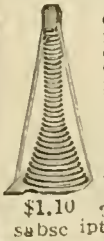

The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. 4½ inches high. It is used by many bee-keepers. Full printed directions sent with each one.

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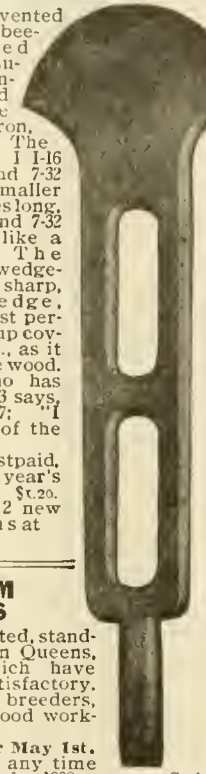

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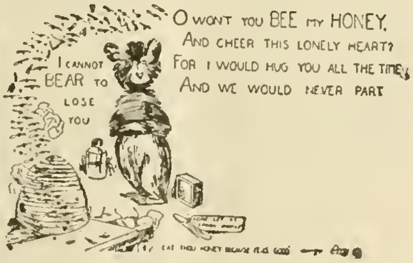
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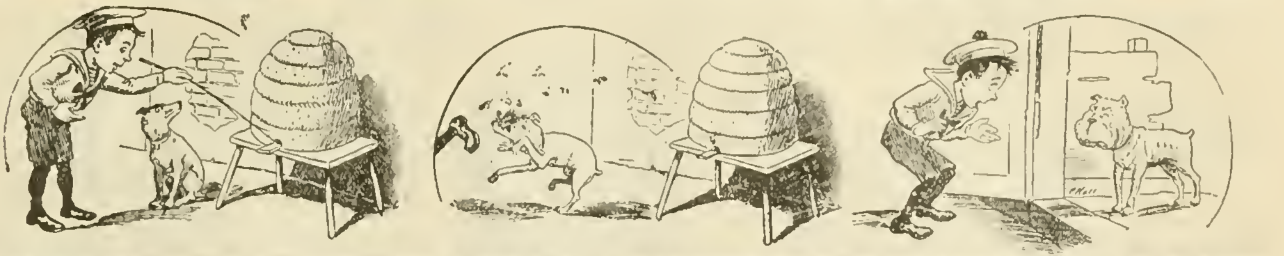

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Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., Chicago, Ill.

Queens Of the 3-Band Leath'r Color'd Strain from Imported Stock

75 cents each. Selected, $1.00.
Circular Free.

3A8 **O. F. Fuller, Blackstone, Mass.**

REF.—Arthur C. Miller, Providence, R. I.

Please mention Am. Bee Journal when writing.

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Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

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Tennessee-Bred Queens!

All from Extra-Select Mothers,
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Best Queens Money Can Buy

38 Years' Experience in Queen-Rearing.
Breed Three-Band Italian Queens Only.

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	1	6	12	1	6	12	Select Breeder	-	$4.00
Untested	$1.00	$5.00	$ 9.00	$ .75	$4.00	$7.50	Nuclei; no queen	1 fr	2.00
Select Untested	1.25	6.50	12.00	1.00	5.00	9.00	" " "	2 "	3.00
Tested	1.75	9.00	17.00	1.50	8.00	15.00	" " "	3 "	4 00
Select Tested	2.50	13.50	25.00	2.00	10.00	18 00	Colony, " "	8 "	8 00

Select queen wanted and add price to price of nucleus or full colony.

For queens to be exported, add 20 percent to these prices, except to Canada, Cuba or Mexico.

JOHN M. DAVIS,

Dealer in, Importer and Breeder of

ITALIAN QUEEN-BEES

Depot, Telegraph and Express Offices,
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When consigning, buying,
or selling, consult

R. A. BURNETT & CO.

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Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

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MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

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NEBRASKA—Collier Bee-Supply Co., Fairbury.
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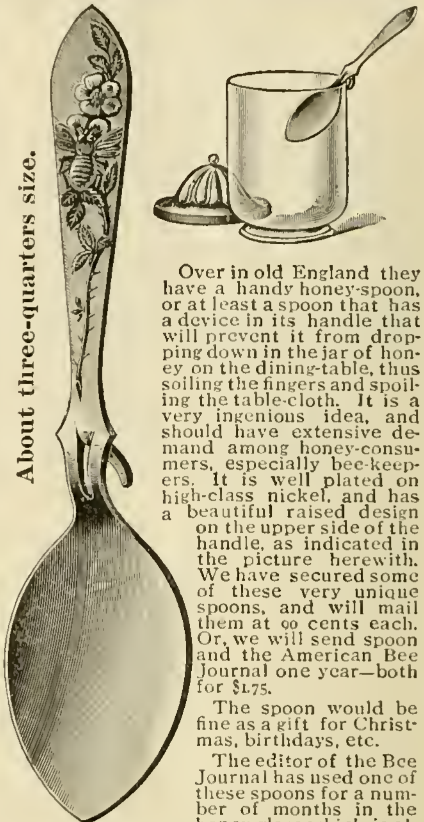
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

An English Honey-Spoon



About three-quarters size.

Over in old England they have a handy honey-spoon, or at least a spoon that has a device in its handle that will prevent it from dropping down in the jar of honey on the dining-table, thus soiling the fingers and spoiling the table-cloth. It is a very ingenious idea, and should have extensive demand among honey-consumers, especially bee-keepers. It is well plated on high-class nickel, and has a beautiful raised design on the upper side of the handle, as indicated in the picture herewith. We have secured some of these very unique spoons, and will mail them at 90 cents each. Or, we will send spoon and the American Bee Journal one year—both for $1.75.

The spoon would be fine as a gift for Christmas, birthdays, etc.

The editor of the Bee Journal has used one of these spoons for a number of months in the honey-glass which is always on his table, and he would not like to be without this spoon again, as it is so convenient, and also unusual in this country. We can fill orders promptly now. You certainly would be pleased with this honey-spoon, and so would any one to whom you might present it. Send all orders to,

GEORGE W. YORK & CO.,

146 W. Superior St., - CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

We are in the market for

HONEY

Both COMB and EXTRACTED. State quantity you have to offer, with all particulars.

HILDRETH & SEGELKEN,

265-267 Greenwich St.,

NEW YORK, N. Y.

Honey and Beeswax

CHICAGO, Sept. 15.—Comb honey continues to sell upon arrival. The fancy comb is bringing 17c, and No. 1 to A No. 1, 15@16c. The amber grades are also unchanged at a range of from 1@3c less. White extracted honey is bringing from 8@9c, according to how much white clover and linden there is therein. The amber grades, from 7@7½c. Beeswax, 30@32c, with an active market for all lines. R. A. BURNETT & CO.

DENVER, Sept. 16.—We quote new comb honey in a jobbing way as follows: Strictly No. 1 white, per case of 24 sections, $3.60; No. 1 light amber, $3.35; No. 2, $3.15. Extracted honey, white, 8⅓c per lb.; light amber, 7½c; strained, 6¾c. We pay 25c per lb. for average yellow beeswax delivered here.
THE COLO. HONEY-PRODUCERS ASS'N.
F. Rauchfuss, *Mgr.*

INDIANAPOLIS, Sept. 20.—The new crop is now moving, and demand seems to be exceptionally good for this season of year. Jobbers are offering fancy white comb at 18c; No. 1 white, 17c. Finest extracted at 10c, with some slight reductions on large quantities. It is presumed that producers are being paid about 2c less than above quotations. This is not a desirable market for amber honey. Producers of beeswax are being paid 28c cash, or 30c in trade.
WALTER S. POUDER.

NEW YORK, Sept. 15.—We are having a good demand for comb honey, principally for No. 1 and fancy white stock. Receipts are rather light as yet, but will increase from now on. We quote: Fancy white, 15c (some exceptionally fancy lots may bring 16c); No. 1, 14c; No. 2, 13c. There are no prices established as yet on dark and buckwheat, and none on the market thus far. These grades will range from 11@12c, possibly 13c for strictly fancy. Extracted honey in good demand, all grades. California, white and water white, 9@9½c per pound; light amber, 8@8½c; Southern, common average, 65@75c a gallon; better grades, 75@80c. All according to quality. West India, such as Cuban and Porto Rico, 75c a gallon. New York State white clover, 8½c per pound; dark and buckwheat, 7½c. Beeswax quiet at 29@30c. HILDRETH & SEGELKEN.

BOSTON, Sept. 19.—Fancy white comb honey at 16@17c; No. 1, 11@15c. Fancy white extracted, 9@10c. Beeswax, 32c.
BLAKE,-LEE CO.

KANSAS CITY, MO., Sept. 15.—The receipts of both comb and extracted honey are good, and the demand active. We quote: No. 1 white comb, 24 sections, per case, $3.35@$3.50; No. 2, $3.00@$3.25; No. 1 amber, $3.00; No. 2 amber, $2.50@$2.75. White extracted, per lb., 7½@8c. Amber, 6½@7c. Beeswax, per lb., 25c.
C. C. CLEMONS PRODUCE CO.

ZANESVILLE, OHIO, Sept. 20.—Honey is in good demand at the present time. Fancy white comb brings, in a wholesale way, 17½@18c; No. 1, about 17c. Best white extracted in 60-lb. cans, 9½@10c. Producers are offered for beeswax 28c cash, or 30c in trade. Wholesale prices vary from 32@35c, according to quantity.
EDMUND W. PEIRCE.

CINCINNATI, Sept 14.—The market on comb honey is very firm, prices ranging in a wholesale way from $3.75@4.00 per case for No. 1 and fancy. Off grades are not wanted at any price. Amber in barrels is selling at 6½@7c, according to quality. White clover extracted 9@9½c; white sage, 9½c; California light amber, 8½c. Beeswax is in fair demand, $32 per 100 lbs. These are our selling prices, not what we are paying, therefore govern yourselves accordingly on these prices. C. H. W. WEBER & CO.

CINCINNATI, Sept. 17.—The demand for all kinds of honey is very good. Comb honey sells about as fast as the shipments arrive. The fancy grade sells readily to the grocers at 16@16½c; No. 1, 15½@16½c. For white extracted honey in 60-lb. cans we are getting 8½@10c, according to quality and quantity. Amber in barrels at 5¾@7½c, according to quality and quantity. The above prices are the selling prices. For beeswax we are paying from 28@30c a lb. for choice bright yellow free from dirt, delivered here.
THE FRED W. MUTH CO.

FALCON FOUNDATION

Years of experience in the manufacture of

FALCON
COMB
FOUNDATION

have made it PERFECT.

Bees like it, and the foremost

Honey-Producers Use It.

It helps materially to increase the

Honey Crop

(Send for our new Catalog.)

Ship us your

BEESWAX

to FALCONER, N. Y.

Will send shipping-tags, when you write asking for quotations.

We pay highest market prices.

W. T. FALCONER MFG. CO.
JAMESTOWN, N. Y.

HONEY WANTED

When you have any to offer, let US hear from you.

If it is Comb Honey, state how it is put up, and the grade;

If it is Extracted, mail us a Sample and state your lowest price delivered Cincinnati.

We can use any amount, and are always in the market

C. H. W. Weber & Co.
2146 Central Avenue, Cincinnati, Ohio

BEE-KEEPERS OF THE NORTH

BEE-KEEPERS OF THE WEST

Is Your crop of White clover Honey Short? We can furnish you

ALFALFA HONEY

Both White and Water-White. Finest Quality. Prices quoted by return mail, and Shipments made Promptly.

BEESWAX wanted for Cash or in Exchange for Bee-Supplies.

Beeswax Worked for you into **Dadant's Foundation** Best by Test. Let us send you proof.

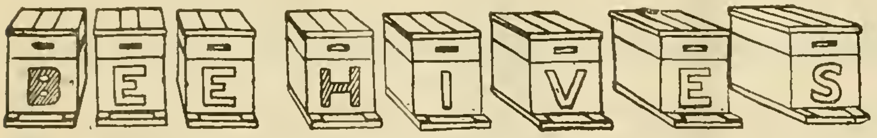
Early Order Discounts now offered for Cash.

Satisfaction Always Guaranteed.

DADANT & SONS, Hamilton, Illinois.

BEE-KEEPERS OF THE EAST

BEE-KEEPERS OF THE SOUTH



Are our **Specialty.** We furnish such extensive bee-keepers as E. D. Townsend and others. Consider getting your bees into **Protection Hives** this Fall. Give us list of Goods wanted.

A. G. WOODMAN CO., Grand Rapids, Mich.

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50,000 Copies "Honey as a Health-Food" To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed **free** at the bottom of front page on all orders for 100 or more copies.

Address all orders to

GEORGE W. YORK & CO., Chicago, Ill.

Sweet Clover Seed!

Sweet Clover is rapidly becoming one of the most useful things that can be grown on the farm. Its value as a honey-plant is well known to bee-keepers, but its worth as a forage-plant and also as an enricher of the soil are not so widely known. However, Sweet Clover is coming to the front very fast these days. Some years ago it was considered as a weed by those who knew no better. The former attitude of the enlightened farmer today is changing to a great respect for and appreciation of Sweet Clover, both as a food for stock and as a valuable fertilizer for poor and worn out soils.

There are two kinds of Sweet Clover. One is the White variety which grows sometimes as tall as 6 to 7 feet. The other is the Yellow, which grows perhaps as high as 2 to 3 feet. The latter blooms from 3 to 4 weeks ahead of the White, which (the White) begins blooming in the latitude of Chicago about July 1st, and continues in profuse bloom until frost kills it off. It is one of the best nectar-yielders known, and the honey produced from it is second to none.

The seed can be sown any time from now until next April or May. From 18 to 20 pounds per acre of the unhulled seed is about the right quantity to sow. The seed is not yet as plentiful as it might be, for the reason that a good many who could gather it don't know its value, or that there is a demand for it sufficient to pay for the work of harvesting, threshing, etc. We, however, have been able to secure a quantity of the unhulled White Sweet Clover Seed, which unhulled is considered the best for sowing, by those who have had the longest experience with it. We can ship promptly at the following prices:

Postpaid, 1 pound for 30 cents, or 2 pounds for 50 cents. By express or freight, f. o. b. Chicago—5 pounds for $1.00; 10 pounds for $1.75; 25 pounds for $4.00; 50 pounds for $7.50; or 100 pounds for $12.00.

If wanted by freight, it will be necessary to add 50 cents more for cartage to the above prices on each order.

If seed is desired of the Yellow Sweet Clover, add 5 cents per pound to the above prices.

Address all orders to,

Arnd Honey & Bee-Supply Co.,

148 W. Superior St., CHICAGO, ILL.

A Bargain in Glass Jars!

Because we have more than we want we are going to offer some all-white, flint glass jars, with no lettering, and which are up-to-date for less than their real value.

The pound size can be used with either corks or paper discs. The latter are much cheaper, and really more desirable than corks. With paper discs (the most perfect stopper known), we will make the price only $3.40 per gross.

The small size holds 5 ounces of honey, and it is known to the trade as the "dime jar." The regular price of this size with corks is $3.25 per gross; but we will let them go at $2.25 per gross.

The foregoing are real bargains for any one who uses glass honey-jars.

Jars will be shipped direct from Pittsburg, Pa., but address all orders to,

SNYDER BEE & HONEY CO.

KINGSTON, N. Y.

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Volume L.
Number 11

$1.00 a Year
10c a Copy

AMERICAN BEE JOURNAL

NOVEMBER, 1910

Mass Agl College apr15
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THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY
GEORGE W. YORK & COMPANY
146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada, $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

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(Organized in 1870.)

Objects.

1. To promote the interests of bee-keepers.
2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

Membership Dues.

One dollar a year.

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Hens fed cut green bone lay more eggs. Get a Crown Bone Cutter. Send to-day for catalogue.
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Lowest
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Untested Italian Queen-Bees

Our Standard-Bred

6 Queens for $4.00; 3 for $2.10; 1 for 75 cents.

For a number of years we have been sending out to bee-keepers exceptionally fine Untested Italian Queens, purely mated, and all right in every respect. Here is what a few of those who received our Queens have to say about them:

> GEORGE W. YORK & CO.:—The two queens received of you some time ago are fine They are good breeders, and the workers are showing up fine I introduced them among black bees, and the bees are nearly yellow now, and are doing good work.
> Nemaha Co, Kan, July 15. A. W. SWAN.

> GEORGE W. YORK & CO.:—After importing queens for 15 years you have sent me the best She keeps 9 1-2 Langstroth frames fully occupied to date, and, although I kept the hive well contracted, to force them to swarm, they have never built a queen-cell, and will put up 100 pounds of honey if the flow lasts this week.
> Ontario, Canada July 22 CHAS. MITCHELL

> GEORGE W. YORK & CO.:—The queen I bought of you has proven a good one, and has given me some of the best colonies.
> Washington Co., Va., July 22. N. P. OGLESBY.

> GEORGE W YORK & CO.:—The queen I received of you a few days ago came through O. K. and I want to say that she is a beauty. I immediately introduced her into a colony which had been queenless for 20 days She was accepted by them, and has gone to work nicely. I am highly pleased with her and your promptness in filling my order. My father, who is an old bee keeper, pronounced her very fine. You will hear from me again when I am in need of something in the bee line. E. E. MCCOLM.
> Marion Co., Ill., July 13.

We usually begin mailing Queens in May, and continue thereafter on the plan of "first come first served." The price of one of our Untested Queens alone is 75 cents, or with the old American Bee Journal for one year—both for $1.40. Three Queens (without Journal) would be $2.10, or 6 for $4.00. Full instructions for introducing are sent with each Queen, being printed on the underside of the address-card on the mailing-cage. You cannot do better than to get one or more of our fine Standard-Bred Queens.

George W. York & Co., 146 W. Superior St. **Chicago, Ill.**

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Queens and Honey. Also three Remington Typewriters. These machines cost, new, $100 each; they look like new, and work like new. Will take $35 each, or will exchange for anything we can use.

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BELLEVUE, OHIO
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By feeding raw bone. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier, profits larger.

MANN'S LATEST MODEL Bone Cutter

Cuts all bone with adhering meat and gristle. Never clogs. **10 Days' Free Trial.** No money in advance.
Send Today for Free Book.
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Ye who are in need of **HONEY** write to us for prices.
Samples 10 cents

We have the following Fine Honey to offer:

Extracted Honey { ORANGE BLOSSOM, SWEET CLOVER, FLORIDA AMBER } In Crates holding 2-60 pound Cans.

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The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

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LANSING, - MICHIGAN.

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Sold at reduced prices. Dovetailed Hives. Sections, and everything pertaining to bee-keeping of the **very best** kept in stock. Large Warehouse on of L. S. & M. S. R. R.

Wholesale and Retail. New price-list just out—**Free.** Let me figure on your wants.

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ROOT'S : GOODS

For Western Pennsylvania.

Liberal Early Order Discounts.
Gleanings and Choice Queens **Given Away.**
Write at once for Circular. Time is limited.

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Successor to Rea Bee and Honey Co.,
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From members of the Michigan Bee-Keepers' Association.

Send your address for free annual booklet, giving names of members, with information concerning the honey they have for sale.

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White Clover and Basswood Honey in tin cans. Will pay 9c cash f. o. b. Wilton. Mail sample and state how much you have. 8Atf

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Only 25 cents per Case!

60-lb. Empty Tins, two to a case; used but once—as good as new.

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This is the only place
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This Combination:

Prompt Service and Lewis BEEWARE

We have in stock a number of **Danzenbaker Bottom-Boards,** both 8 and 10 frame, which we are closing out **for 17 cents apiece.**

Send for Free Catalog. BEESWAX WANTED.

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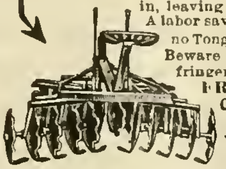

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Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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Sections at $3.50 a 1000

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one-piece 4¼x4¼x1⅞ two-beeway Basswood Sections. They are No. 2 quality, and listed at $5.00 per 1000. **Send in your orders now, before they are sold out.**

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Write for Catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee-Supply Co.

Nicollet Island **MINNEAPOLIS, MINN.**

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You bee-keepers who use odd-sized equipment can have it made now if you will send to us sample with your order.

DO NOT DELAY

until the busy season to have these odd-sized Goods made—you will be sure to be refused. This causes you annoyance, delay, loss of honey and loss of money.

No factory can make these Goods for you during the rush.

We are now well caught up on orders and can make anything special which you may want. Now's your chance. Take time by the forelock and let us make such Goods for you now and have them on hand ready for next season.

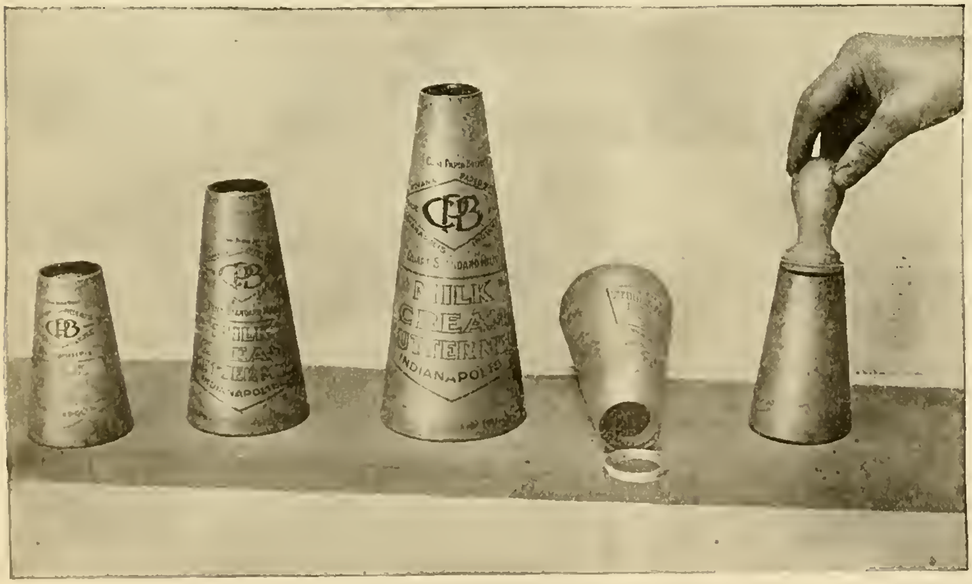
Remember this offer is of short duration. "A word to the wise is sufficient."

G. B. Lewis Company,

Manufacturers of Beeware, Watertown, Wis.

"If Goods are wanted Quick, send to Pouder."

PAPER HONEY-JARS — A Sanitary, Substantial Paper Bottle MADE OF HEAVY Waxed Paper, and



Cheap enough to Give Away

Every bee-keeper who produces Extracted Honey and is interested in building up a home market for his product, will be interested in this new container. It is neat, does not leak, and the bee-keeper can deliver his honey from house to house without waiting to exchange containers. Many consumers will take home a pound or two of honey if they do not have to pay additional for a container. Especially desirable for granulated honey, even in very damp climates. On the market for only a short time, but many leading bee-keepers are sending in second and third orders.

Now packed in uniform shipping boxes of one gross each, complete with stoppers, and a stopper-inserter, with each gross.

Please note the very light weight when packed for shipment, a feature by which transportation by express is often as cheap as by freight.

PRICES:

	1 gross	6 gro.	wt.
Half-Pints	$1.50	$ 8.00	13 lbs.
Pints	1.80	10.00	18 "
Quarts	2.30	12.00	28 "

Sample dozen, any size or assorted sizes, by express, for 25 cents, not prepaid. Sending samples by mail is not entirely practical. **Descriptive Leaflet Mailed Free.**

Walter S. Pouder, 859 Massachusetts Ave., Indianapolis, Ind.

AMERICAN BEE JOURNAL
L. L. LANGSTROTH
CHAS. DADANT

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DR. C. C. MILLER, Associate Editor.

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Editorial Notes and Comments

Uniting Weak Colonies

It is a great mistake to attempt to winter a lot of weaklings. If a colony has not enough bees to cover at the very least 4 combs, unite. If the work is not already done, the sooner the better. There is more than one good plan of uniting. The newspaper plan is the favorite plan with the writer, possibly because it is his own invention.

No special preparation is needed. Put a sheet of newspaper over one of the colonies, and over that place the story containing the other colony. That's all—the bees will do the rest, except that after 3 or more days you will assemble in the lower story the best combs of each, so as to have the colony all in one story. Yet that is not absolutely necessary. If there is any choice of queens, you may destroy the poorer, but if you have no choice the bees will attend to the queen-business. But there is some advantage in having the queen of the upper colony killed in advance; there is less danger of any of the bees going back to the old location.

Either colony may be placed on top of the other; other things being equal it is well to put the weaker on the stronger, always leaving the lower on its own stand.

Brood-Combs for Bait in Supers

In the British Bee Journal L. S. Crawshaw raises the question:

> "Is there not danger of getting pollen in the sections when inserting shallow frames of brood in the super?"

One would think so, but in actual practice it does not seem so. Years ago the writer practiced using a frame of brood in the section super to get the bees to work in the super, and there was no trouble with pollen; but if the brood was left in the super until capping began on the sections the capping would be darkened from the black wax carried across from the brood-comb to the sections.

But instead of using brood in the super, a very much better way is to use bait-sections—sections of the previous year that have been partly filled and emptied out. In some of the foreign books or papers one reads of using bait-sections partly filled with honey. Bees will start about as well—perhaps just as well—on the empty comb, and it is hardly practicable early in the season to have honey in baits, for if kept over from the previous season the honey would be granulated.

A single bait-section in the center of the super is all that is needed. In a poor season this bait-section may be filled and sealed and not another section in the super started, but in a good season it will be but a short time after the bait is occupied before the bees will be at work all over the super.

Price of a 1-lb. Bottle of Honey

J. E. Crane estimates, in the Bee-Keepers' Review, that when a producer gets 8 cents for a pound of extracted honey at wholesale, the consumer must pay 24 cents for it. He figures thus:

One pound extracted honey..........	8c
Freight on same..........................	¾c
Bottle..	4¼c
Freight to jobber..........................	1c
Cost of selling to jobber...............	½c
Labels, cost of bottling, etc...........	½c
Jobber's commission.....................	2c
Retailer's profit............................	5c
Total..	22c

Then another 2 cents must be added for loss from leakage and waste, and to pay the one who puts up the honey. Editor Hutchinson well says in comment:

> "It does seem a pity, as though something was wrong, when it costs twice as much to put a pound of honey into the consumer's hands as it does to produce the honey."

Right on the face of it, it looks like paying a good deal for glass that is to be thrown away, to pay more for the glass to contain 2 pounds of honey than the producer would get for another pound of honey. It might be a work of philanthropy to educate the consumer to buy honey by the can of 60 pounds. Any family can—ought—to consume that much in a year. The head of the family can buy such a can for $6, while at 24 cents a bottle it would cost him $14.40. That saving of $8.40 ought to appeal to him. At the same time the producer would be the gainer to sell at $6 a can rather than to sell at 8 cents a pound to the dealer.

Keeping Comb Honey

> "To preserve comb honey in the best condition, each section should be wrapped in 3 or 4 thicknesses of tissue-paper and stored in a dry, warm place, well ventilated, and where the temperature is never allowed to get below 80 degrees Fahr."—*British Bee Journal.*

Such care of honey approaches, if it does not entirely reach, perfection. But is it practicable? Perhaps on a small scale with a few sections for home use, but hardly on a commercial scale. Certainly not in the northern part of this country. With the thermometer flirting with zero for many days together, it is not easy to have a place where the mercury never gets below 80. In our living apartments we want no such heat. The "well ventilated" part adds greatly to the difficulty of keeping up the temperature.

But some approach may be made toward what is given as the ideal. Too often honey is kept where it freezes occasionally, if not frequently, and then we have cracked combs and granulation of the honey. If we can not keep it at 80, surely we need not let it freeze.

As to ventilation, is it at all necessary? Likely, to some extent, to cure honey, but hardly to *keep* it. A section of honey in perfect condition needs no evaporation, and so no ventilation. The trouble is that too often the honey is *not* cured and in perfect condition when cold weather arrives. A very important thing is that the honey be kept in a hot place while it is still hot weather. And that is not difficult. In an attic it may be nearer 100 than 80. And one hot day in August will stand off several cold days in winter. Indeed, honey that has been kept through the hot weather in such a place has been known to keep perfectly through the following winter in a freezing temperature. So we might, in a sense, say that the important part of the winter keeping of honey is the August keeping.

A cellar is, in general, about the worst place to keep honey. In summer it is damp, except in such dry climates as Colorado, and the honey becomes thin, oozes through the sealing, and weeps down over the surface. But in winter, *with a furnace*, it is an excellent place. Even if the temperature does not often go above 50, the air is kept dry by the furnace, and the honey keeps well. Of course, a stove in the cellar would also do.

A few sections may be kept well in the kitchen, the higher up in the cupboard the better. Honey that has been kept through the hot weather of summer in an attic may be kept through the winter in the same place. Where salt will keep dry, honey will keep well, other things being favorable.

Asprea Introducing Cage

From sunny Italy is received a new introducing cage, concerning which its inventor, Vincent Asprea, writes as follows:

> I take the liberty to send you an introducing queen-cage of my own.
>
> With this I can introduce queens (and, in fact, I introduced many) without any previous pinching of queen-cells, for the bees gnaw them out in 24 hours after the queen has been liberated. This is *a fact*. I observed it again and again, so that now I never look for queen-cells when introducing. You see, then, that any danger from some queen-cells being overlooked is entirely discarded. This is perhaps its best feature, one for which it is decidedly superior to any other introducing cage.
>
> But it works well for safe introducing as well. By means of the tin handle I hang the cage with the queen in between two frames in the queenless colony, the tin door being shut. Twenty-four hours later I open the tin door so that the bees can enter the cage through the queen-excluder. I wait for a while then I observe the interior of the cage: in 99 cases out of 100 I find the queen walking peacefully among the bees, they making no attempt to ball her. An intimate acquaintance is made, and the body of the queen is impregnated with their odor. Twelve hours later, or less, the queen can be liberated with absolute confidence of a kind reception.
>
> VINCENT ASPREA.
>
> Italy.

It may be explained that at one end of the cage there is a strip of queen-excluder zinc. This is fastened at one end by a small nail on which it works as on a hinge, the other end of the strip being held in place by another nail loosely pushed in. Over this strip of perforated zinc is a strip of tin of the same size as the zinc, and fastened on in the same way. For the first 24 hours the cover remains in place over the zinc. Then the bee-keeper opens the hive, swings the tin strip open, and returns the cage. The perforated zinc still holds the queen imprisoned, but allows the workers to enter the cage. For some reason bees will generally not attack a queen in a cage when they will do so if she is entirely at liberty. After another 12 hours, the queen is let out of the cage.

The special point of difference between this cage and cages in general is that after 24 hours confinement the queen is allowed for 12 hours to be in direct contact with the bees in the cage, as they may freely pass in and out through the perforations in the zinc. In this there is certainly an advantage. Mr. Asprea thinks it differs from other cages in that with this cage the bees themselves will destroy any queen-cells present. In many cases they will do so with the use of any other cage, and whether they will do so in all cases with this cage could only be told by long trial.

An American bee-keeper—was it E. F. Atkinson?—devised an introducing cage that makes use of the same principle, only the American cage acts automatically without the need of opening the hive to allow the bees to enter the cage through the excluder, and again to let the queen out of the cage. In other words, the American cage does not require the hive to be opened at all after it is put in the hive, unless it is desired to take the cage out. This automatic action is secured by the usual way of having tubes of queen-candy for the bees to eat through, only in this cage there are two plugs of candy to be eaten through. The one plug is of the usual length, allowing the bees to eat through it in perhaps 24 hours. When they eat through this plug, the bees reach the excluder, through which they may freely pass, but through which the queen can not pass. The other plug of candy is longer, requiring perhaps 12 to 24 hours longer to be eaten through. But there is no excluder in the way when this longer plug is eaten through, and the queen is thus allowed to pass out of the cage at her leisure.

It seems a little strange that this cage with such a strong feature in its favor has not come into use more generally. But many a good thing remains in obscurity, later to be resurrected by some one else.

What About Long-Tongue Bees?

J. L. Byer is heartily endorsed by G. C. Greiner, when he says: "The long-tongue idea, in so far as it refers to the different races, is pretty much a humbug." I'm not in the least interested in long-tongued queens, but I like to see the under dog have fair play. Have the long-tongue sellers really been trying to humbug their customers?

Does the phrase "so far as it refers to the different races" mean that there is no difference as to tongue-length among the different races? But have not measurements by capable and disinterested men shown that there is a difference in the different races? Anyway, what has that to do in the case? Have the sellers of long tongues claimed anything on the score of race. Have they not claimed they had long-tongued queens' without putting any emphasis on the race?

Measurements having shown a difference in length among bees, is it anything impossible that a colony of bees might be found with tongues longer than the average? I can endorse Mr. Greiner's good opinion of Mr. Byer, and go him a little better perhaps, for it is very rarely that I do not see things as Mr. Byer does, but in all fairness, if Mr. Byer thinks the long-tongued bees were not what they were represented to be he should give us something more than bald assertion, for if I had been selling long-tongued queens I wouldn't feel comfortable to have so good a man as Mr. Byer call me a humbug.

If I may be allowed to express any opinion on the subject, I may say that I believe there have been colonies that would do considerably more on red clover than the average, the pity being that no one has carefully bred up a strain that would reliably perpetuate the characteristic. There is still room for some one to do that. But the more hopeful thing is, instead of trying to fit the tongues to the clover, to fit the clover to the tongues. There is a field for some Burbank to produce a strain of red clover with corollas short enough for bees with ordinary tongues.

Since the foregoing was written the Canadian Bee Journal is received in which Morley Pettit says: "Second crop red clover yields surplus gathered by some strains of Italian and Carniolan bees." When next Messrs. Byer and Pettit meet, I'd like to umpire the fight. C. C. MILLER.

Pearce Method of Bee-Keeping

This is an illustrated pamphlet 6x8½ inches, just issued (July, 1910), "which fully explains the plan of keeping bees successfully in upper rooms, house attics or lofts, whereby any one either in city or country is enabled with only a small expenditure of labor to get a good supply of honey without coming in contact with the bees, and without having the bees swarm out and leave, or being troubled from stings as you work on one side of the wall and the bees on the other. This method also tells the commercial bee-keeper how he can divide his bees when he wishes to, instead of waiting and watching for them to swarm. It can all be done on the same day, or days if more than one apiary, as the time required for this operation is merely nominal, no swarms issue and go away. These methods are fully explained in this book, and how to care for the bees on the Pearce plan."

We mail this pamphlet for 50 cents, or club it with the American Bee Journal one year—both for $.135. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

"Langstroth on the Honey-Bee"

This is one of the standard books on bees. It tells in a simple, concise manner just how to keep bees. It was originally written by Rev. L. L. Langstroth, who invented the movable-frame hive in 1851. The book has been brought right down to date by Dadant & Sons, than who there are no better or more practical bee-keepers in this or any other country. It contains nearly 600 pages, is fully illustrated, and is bound in cloth. Every topic is clearly and thoroughly explained, so that by following its instructions no one should fail to be successful with bees. Price, postpaid, $1.20; or with the American Bee Journal one year—both for $2.00. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Miscellaneous News-Items

A Barrel of Honey a Year for Medicine

> I began eating extracted honey Nov. 11, 1909, for kidney trouble, and have used a 60-pound can every 3 months since then, using my third can now. It cured my kidneys. This is at the rate of 240 pounds a year. I can eat 300 pounds a year, I think, and may be more.—C. A. Neal, in *Gleanings*.

Mr. Neal has been eating honey at the rate of two-thirds of a pound a day. Should he increase it to 300 pounds a year then he would be consuming about five-sixths of a pound a day. If every bee-keeper and every member of the bee-keeper's family would equal Mr. Neal in using honey, there would be no question about finding a ready market for all the honey that is produced.

It seems that Mr. Neal ate all that honey as a "medicine." We think it came pretty nearly being a food, also. Honey is both medicine and food.

This writer has not kept track of the amount of honey he uses personally during the year, but can say that he has it on the table all the time, and rarely a meal passes that he does not use it. Surely, bee-keepers and those interested in the production of honey ought to set a good example to the rest of the world, whom they would like to have buy and use their product more generously.

All honorable means should also be employed to induce the public to consume more honey, whether they use it as a medicine or a food. If every bee-keeper would do his part in distributing liberally such leaflets as "Honey as a Health-Food" among his neighbors, we think he would be surprised at the increase in the demand for good table honey, especially if there are children in the families.

Most bee-keepers are able to produce a good honey crop when conditions are favorable, but most of them do not know how to dispose of their honey profitably afterward. Not every producer is a good salesman. But there is no doubt that more can be sold in the home market if every producer would do what he could to educate his neighbors concerning the value of honey as a food.

◆

Ferguson Uncapping Machine

Gleanings thinks this machine gives promise of being more of a success than anything it has seen, and among other things says:

> In the hands of a person without experience, the Ferguson (if the combs are right) will do twice or three times as much work, and much better than that same person could do with an uncapping-knife; but in the case of an old, experienced extracted-honey producer, familiar with the art of uncapping with a Bingham knife, the differnnce in speed, says Mr. Townsend, will not be so noticeable. Indeed, he was of the opinion that he could work almost as fast with a knife as with the machine. But even if no faster, he likes it because its work is so perfect.

Bee-Stings and Rheumatism

L. S. Crawshaw says in the British Bee Journal:

> Most of the reported cases of cure seem to be those of slightly-affected patients. To test the matter thoroughly, I have obtained the "co-operation" of a local sufferer and his doctor. The victim is suffering from chronic rheumatism, I believe, and is so bad that he can only hobble with the aid of two sticks, several of his joints having no movement whatever. Since the spring I have applied twice a week from 20 to 30 stings in various parts of his anatomy, and there certainly seems to be a slight improvement. I hope to report more fully later on, for, as the patient himself says, if it will cure him "it'll cure anybody."

A report from such a man as Mr. Crawshaw ought to count for something.

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"Flakes" (Corn or Rice) and Honey

Have you ever tried eating rice or corn flakes with honey and milk or cream? If not, just try a bowl full some cool morning and see how fine it is. Fill the bowl (say a pint or a half-pint) with the nice brown flakes, then pour on the milk or cream, and afterward stream on several spoonfuls of good extracted honey. We prefer to mix it all together with a spoon, and then eat it. There may be a more delicious breakfast-food combination than this, but we have not yet found it.

We have often been surprised that more bee-keepers do not use more honey on their tables. Why spend 6 cents for a pound of sugar, and wholesale honey at 8 or 10 cents per pound, when the honey will sweeten twice as far as sugar, and is so much better and more healthful, anyway?

◆

Modification of the Jones Swarm Prevention

The Jones method of preventing swarming received considerable publicity last year. I don't know to what extent it was tried. Some objected to the disagreeable work of uncapping the brood; but a Florida subscriber says this may be avoided by sprinkling dry sulphur over the combs. This will kill all *unsealed* brood, but not injure the sealed brood, which would be more desirable than uncapping sealed brood, and accomplish the same result. —*Bee-Keepers' Review*.

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A Little Queen Experience

An Iowa bee-keeper received a queen during the past season which he thought was a drone-layer, as the colony to which he introduced her had 2 frames of all drone-brood soon after introducing her. This he reported to the queen-breeder, who at once sent him another queen without charge.

On receipt of the second queen the bee-keeper opened the hive to kill the first queen and introduce the second, when he found the hive was full of worker-brood, and that the first queen was all right. He then took 6 frames of brood and 2 frames of honey from other colonies, thus making a new colony, to which he introduced the second queen, which did well. The bee-keeper, being an honest man, sent the price of the second queen to the queen-dealer, and reported the particulars of the case.

We mention this instance as no doubt there are many others just like it, in which queen-dealers do not always get a square deal. It won't do to judge hastily on receipt of a queen. Sometimes a young queen in beginning to lay does not lay regularly, but becomes all right in a few days. It is very likely such queens are frequently killed and replaced; but if given time enough would have proven themselves all right.

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The Great Willow-Herb

Editor Hutchinson says he knows of no plant that yields more honey in a season than the great willow-herb, or *epilobium*, the plant which is found in such abundance in Northern Michigan in places where forest fires have been. Hence its common name, "fireweed." It yields honey in such weather as would stop all flow from basswood or clover, say with a cold wind blowing from the north. But it can not be relied upon as permanent pasturage. Usually it lasts only 3 years, when other plants crowd it out, not to appear again until after another fire. The honey is of the whitest, and of pleasant flavor.

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Advertising the Use of Honey

The extent to which the use of honey might be encouraged is practically unknown to the producer of this most delicious sweet. The manufacturers of corn syrup are good advertisers, else they could not begin to induce the people to use the quantity of their "stuff" that they put upon the market. We believe the day is coming when organizations of bee-keepers throughout the country will advertise honey in a way that will force it upon the attention of the public, just as the corn-syrup makers are doing now. The fact is, there is no comparison between honey and corn syrup as a food. Honey is so far ahead of corn syrup as a food, that when once the former is properly advertised the latter will be forgotten entirely.

A sincere effort was made a few years ago to get the producers of honey together into an organization whose main purpose was to advertise the use of honey. It seems, however, that the time was not then ripe for such effort to be successful. Its object was misunderstood, and the motive of its projectors unfairly questioned. Some of these days, and not in the far distant future, we believe bee-keepers will get together in their own interest, and develop a plan of letting the public know the true value of honey as a daily food, that will result in the creation of such an increased demand for honey that it will take every pound of it at a profitable price.

In view of the advanced cost of nearly every food product today, not a pound of good honey should be sold for less than 12 or 15 cents, and, of course, some kinds at 20 to 25 cents per pound. Many a man will spend 10 or 15 cents for a cigar, which soon is all "gone up in smoke," and he is none the better for having used it? Why, then, should the same man object to paying 20 or 30 cents for a pound of honey? Surely it is worth more than one or two cigars!

Of course, one difference is, that the men do not usually do the buying for their tables, although, of course, they must finally "foot the bills." When such spenders (or spendthrifts, shall we say?) once begin to see how much better it would be to spend their money for something really beneficial to their health, and which is also a delicious food product, we think we can see such a demand for honey that will make the bee-keeping business one of the most profitable known.

Some of these fine days there will come forth an advertising Moses who will lead the honey-producers of this country in a business way which they know not now, but in which they will see that they have been blind for years to the opportunities for the financial results in bee-keeping that should be theirs. The bee-keepers of at least one State are waking up along the line here indicated, which is simply one of good business sense and co-operation that is bound to be helpful to all the producers of good honey in that State. There is no reason why other States should not "go and do likewise." Neither is there any good reason why the National Bee-Keepers' Association should not take the lead in this matter, and have all the State associations affiliated in a way that will result in one of the greatest strides forward for bee-keepers that the world has ever known.

Just think of this, ye producers of honey, and be ready to give your heartiest co-operation when the proper time arrives. And may it be soon!

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A Monster Apiary

In a foreign bee-paper we are told that the latest idea in America is an apiary, or rather a series of apiaries numbering 50,000 colonies, and that the company owning this giant concern has been incorporated. All of which is true enough except that about 49,000 of those colonies are only on paper as yet. As there is only one real bee-man connected with the enterprise, it is possible that most of them will remain on paper.

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The Paper Honey-Bottle

This is a new honey-package. It is also used by milk-dealers, but has never been used very much for retailing honey.

Perhaps we can not do better than to copy two paragraphs from the September Bee-Keepers' Review, as follows:

> One of the greatest drawbacks in the putting up of extracted honey for the retail trade, is the cost of small packages; but, at last, we have something that is decidedly low in price—jars made of thick, heavy paraffined paper. They are slightly conical in shape, and paper discs are used for stoppers, the same as they are used in milk-bottles. Walter S. Pouder, of Indianapolis, Ind., is the distributing agent for the manufacturer, and has sent me some samples, and a circular from which I quote the following:
>
> "Every bee keeper who produces extracted honey, and keepers of retail stores, will at once be interested in this new honey package. It is neat, does not leak, is especially desirable for granulated honey, as jars can be filled, and after granulation takes place the consumer can remove the paper bottle, thus leaving a beautiful cone of granulated honey ready for the table. Such packages are not affected by moisture, regardless of any damp climate. The bee-keeper can deliver his honey from house to house without the annoyance of exchanging containers, and dealers and stand keepers will make many additional sales by providing a container free of charge. The jars can be labeled or a rubber stamp can be used. After experimenting with different patterns of this ware, I have given this the preference on account of its being the most substantial, serviceable and securely made. The shape of the jar means the greatest possible strength for amount of material used."

Mr. Pouder has also sent us samples of the assorted sizes, and we should think they would be just the thing for retailing honey. They are very cheap, as the quart size, in quantity, costs only one cent each, and other sizes correspondingly less.

What bee-keepers have needed for years is a cheap package for retailing extracted honey. The glass jar is too expensive, and is also too easily broken. The paper honey-bottle, or jar, is not easily injured.

A mistaken notion for years has been that the customer must see how beautiful the honey is, so glass, on account of its transparency, has been extensively used. What bee-keepers need is to establish a reputation for their own honey, being sure that it is well ripened and of the very finest flavor and quality, always. After that, simply their label on the package should be a sufficient guarantee that the contents are all right. It is not necessary either to see or taste the honey thereafter.

We believe that the paper honey-bottle is a great thing for retailing honey, and will be widely used when once its value is appreciated.

Should the honey granulate in this package, it is very easily removed with a sharp knife, and then the granulated honey can be sliced off as needed. It can afterward be melted in some other vessel, if desired. It is just possible that it can be liquefied all right in the paper bottle, as it is made of paraffined paper.

It is hoped that bee-keepers will give this new honey-package a trial, as it is so very inexpensive. In shape it is almost like a megaphone, except very much smaller in size.

A sample dozen, any size (quarts, pints, or half-pints), will be sent by express, not prepaid, for 25 cents. Address, Walter S. Pouder, 859 Massachusetts Ave., Indianapolis, Ind.

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Illinois Fair Apiarian Exhibits

It was our privilege, as well as pleasure, to act as judge of the bee and honey exhibit at the Illinois State Fair, Oct. 5, 1910. Mr. W. E. Davis, of Libertyville, Ill., is the affable superintendent of the Apiary, Culinary and Pantry Stores Department of the Fair. He is making a success of his work, and is the right man for the position. He very kindly tendered as our assistant, Mr. E. C. Young, a very pleasant young man, also from Libertyville.

As usual the exhibits of honey, beeswax and bees were of a high order. The competition was so close that it was at times very difficult to decide which deserved the first premium. There were three exhibitors competing for nearly $400 in cash premiums. They were A. Coppin and wife, of Wenona; Chas. Becker, of Pleasant Plains; and Jas. A. Stone & Son, of Springfield. The A. I. Root Co. also had a good display of bee-supplies, in charge of Mr Warren and Mr. R. W. Boyden, but this display was not entered for competition, as there were no premiums offered on exhibits of bee-supplies.

As the exhibits of honey, beeswax and bees were all so good it seems too bad that more bee-keepers in the great State of Illinois do not take an interest in the Apiary Department of this great Fair. Surely the management has offered liberal premiums, and more bee-keepers should show their appreciation by entering more competing exhibits. However, those who have so faithfully appeared annually with their exhibits deserve not only the thanks of the bee-keepers of the State of Illinois, but also all the cash premiums they so honorably win. Certainly the Apiary Department of the Fair was very creditable to the industry of this State, and ought to result in increased interest in the production of honey as well as its consumption.

While all three of the displays of designs in beeswax were excellent, one in particular deserves special mention. It was exhibited by Jas. A. Stone & Son, having been made by the junior member of the firm, Mr. Percy Stone. It represented some of the "grafty" members of the Illinois State Legislature around their jack-pot, which has become so notorious since the last session. The kettle, or pot, was made of beeswax, and in it were several members of the Legislature, others were on the outside, and one or two were climbing up, endeavoring to get in with the rest. Some more members were standing at a distance, and all were much interested in the contents of the jack-pot. A chain made up of a number of links of beeswax bound the whole together. Near by stood Uncle Sam, made of beeswax, admonishing the members to be careful how they voted. The whole was certainly an ingenious piece of work, and well deserved the first premium which it won.

The little daughter of Mr. Coppin had some very fine comb-honey work done by the bees. The words "Illinois State Fair" and "A. Coppin, Wenona, Ill.," were all represented in comb-honey letters.

Mrs. Coppin did some good work in uncapping and extracting on the Fair grounds.

The result of the judging is as follows:

Display of comb honey—1st premium, Coppin, $20; 2d, Becker, $15; 3d, Stone, $10.

Collection of labeled cases containing 12 or more pounds of white honey from different flowers—1st, Becker, $8; 2d, Coppin, $5.

Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers—1st, Becker, $8; 2d, Coppin, $5.

Case of white clover comb honey, 12 to 24 pounds—1st, Coppin, $4; 2d, Stone, $3; 3d, Becker, $2.

Case of sweet clover honey, 12 to 24 pounds—1st, Becker, $4; 2d, Coppin, $3; 3d, Stone, $2.

Case of bassword comb honey, 12 to 24 pounds—1st, Coppin, $4; 2d, Becker, $3; 3d, Stone, $2.

Case of amber comb honey, 12 to 24 pounds—1st, Becker, $4; 2d, Stone, $3; 3d, Coppin, $2.

Display of samples of extracted honey, not less than ½ pound each—1st, Becker, $5; 2d, Stone, $3; 3d, Coppin, $2.

Display of extracted honey—1st, Becker, $20; 2d, Coppin, $15; 3d, Stone, $10.

Honey extracting on the grounds, execution and explanation considered—1st, Coppin, $5; 2d, Stone, $3; 3d, Becker, $2.

Frame of comb honey for extracting—1st, Coppin, $5; 2d, Stone, $3; 3d, Becker, $2.

Display of candied honey—1st, Becker, $20; 2d, Stone, $15; 3d, Coppin, $10.

Display of beeswax—1st, Coppin, $15; 2d, Becker, $10; 3d, Stone $5.

For a full colony of bees of any race in observatory hive—1st, Stone, $5.

One-frame observatory hive of dark Italian bees with queen—1st, Coppin, $4; 2d, Becker, $3.

One-frame observatory hive of Golden Italian bees with qeeen—1st, Coppin, $4; 2d, Becker, $3.

One-frame observatory hive of Carniolan bees with queen—1st, Becker, $4; 2d, Coppin, $3.

One-frame observatory hive of Caucasian bees with queen—1st, Coppin, $4; 2d, Becker, $3.

Honey-vinegar, ½ gallon, with recipe for making—1st, Becker, $4; 2d, Coppin, $3; 3d, Stone, $2.

Display of designs in comb honey executed by the bees under the control of the apiarist—1st, Coppin, $15; 2d, Becker, $12; 3d, Stone, $8.

Display of designs in beeswax—1st, Stone, $20, 2d, Becker, $12; 3d, Coppin, $8.

For manipulating swarm of bees in cage—1st, Coppin, $15.

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Two Wheelbarrows to Save Labor

Two wheelbarrows used for wheeling honey into the honey-house for extracting, allows one of them to remain in the house while the other is being filled in the yard, thus the saving of unloading each time the "outside man" comes in with a load.—*Bee-Keepers' Review.*

◆

Calico for Hive-Covers

L. S. Crawshaw says in the British Bee Journal that he has for years had in use hive-covers covered with calico. Some of them had the calico glued on before painting, and are all right if painted from time to time, but are not so satistactory as those which had the calico laid down on paint.

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Bee-Moth and Stone Bee-House

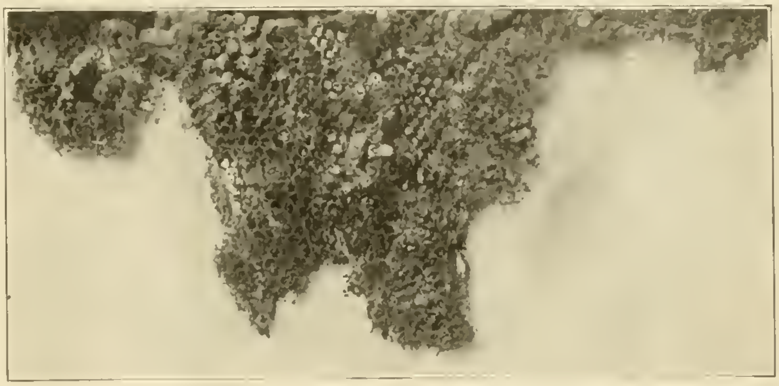
We take the following paragraphs, as well as pictures, from the Second Annual Report of the State Entomologist of Indiana, Benj. W. Douglass; the bee-keeping part of the Report being prepared by George S. Demuth, assistant in charge of the Divsion of Apiculture:

An Old Stone Bee-House.

The Bee-Moth.

Formerly considered a great pest, but the intelligent apiarist of today seldom gives it a passing thought except to protect combs not occupied by bees from their ravages.

Very often we hear the expression from farmers that they used to keep bees, but the worms got in and ate them up. The "worm" referred to is the larva of the bee-moth, and it is never to be found in a healthy, well-cared-for colony. The moth is liable to invade the home of a weakened colony, and with the old type of box-hive it may become an injurious pest. The newer types of frame hives leave no place of refuge for the young larvæ, and the bees can readily defend themselves. Furthermore, the Italian bees defend their homes against the attacks of the bee-moths much better than do the black or German bees. Invariably the presence of the bee-moth is an evidence of careless work on the part of the bee-keeper.



Brood-Comb Destroyed by the Bee-Moth.

Notice in the picture how the comb has been eaten away, and the remains covered with the webs of the bee-moth.

The old stone bee-house shown in the picture is in Southern Indiana. It figured in Edward Eggleston's "The Hoosier School-Boy." The hives were arranged on shelves on the inside, and the bees entered through the entrances indicated in the picture.

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"The Practical Bee-Guide"

Six years ago the first edition of the Irish Bee-Guide was published. A second edition has now appeared, and the title has been changed to "The Practical Bee-Guide." Certainly the character of the work warrants the change of name. It has something more than 230 pages, measuring 7x4¾ inches each, written by Rev. J. G. Digges, M. A., the genial editor of that sprightly monthly, the Irish Bee Journal. The style is clear, and of such character as to make the book pleasant reading, in spite of the fact that it is so compactly written that it would be hard to get more facts into the same number of pages. Each paragraph is consecutively numbered in bold-faced tyye, making the constant reference to these different paragraphs a matter of great convenience. The bee-keeper who desires to increase the size of his library should add to it a volume of "The Practical Bee-Guide." We can order it for you, bound in art linen, for $1.10; or with a year's subscription to the American Bee Journal—both for $1.90.

The Front-Page Picture

The picture on the front cover-page this month shows the "Cleome Apiary" of Geo. D. Caley, of Cozad, Nebr. When the picture was taken he had about 50 colonies, but the cleome plants were so large that they hid part of the hives. Mr. Caley thinks that *Cleome integrifolia*, or Rocky Mountain bee-plant, is one of the best nectar-yielders in Nebraska. When in bloom the bees work on it from daylight until dark. The plant grows from 4 to 5 feet high, and branches out several feet. We remember seeing it for the first time when attending the Denver convention of the National Bee-Keepers' Association some years ago. It is a rich honey-plant, and the flavor of the honey is very pleasant.

Mr. Caley has attended several of the National conventions, and is an up-to-date apiarist, having been engaged in the bee-business for many years.

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Sequoyah Co., Okla., Association

Recently there was organized the Sequoyah Co., Okla., Bee-Keepers' Association, at a meeting held in Sallisaw, Okla. H. B. Clark, of Sallisaw, was elected President, and P. F. Dooley, of Brushy, Secretary. A Purchasing Committee composed of John Kesterson, Ben Brackett, and J. R. McMurtrey were selected.

The next meeting will be held this month, at which time all the local bee-keepers will be notified.

We wish this new Association a very successful career.

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Chicago-Northwestern Convention

Time—November 30 and December 1, 1910.

Place—Chicago, Saratoga Hotel, 150 Dearborn Street, opposite First National Bank Building.

Meetings—Begin 10:30 a.m., Wednesday, and continue until Thursday afternoon. It is the 31st annual session.

As stated in the October issue of the American Bee Journal, the Saratoga Hotel makes rates for rooms $1.00 per day and up. Meals may be secured at the hotel or at any other place desired.

Chicago is centrally located, and reached by nearly all railroads. This meeting is held during the week of the International Live Stock Exposition, and bee-keepers can arrange to visit the Exposition during their stay in the city.

Program—There will be several 5-minute talks and papers by bee-keepers who are prominent in beedom. Discussions of papers, Question-Box, business and sociability will make this one of the best meetings the Association has ever enjoyed.

Do not forget the date. Make your plans to be present so as to give your own experiences as well as to get suggestions from the papers and discussions. We need your help, and we will try to help you.

Hamilton, Ill. LOUIS C. DADANT, *Sec.*

Mr. C. P. Dadant, Dr. C. C. Miller, Miss Wilson, and many other prominent bee-keepers are expected to be present. We hope all will come who can do so, and help make it the banner convention of the year.

The Illinois State Convention

The 20th annual session of the Illinois State Bee-Keepers' Association will be held at the State House, Thursday and Friday, Nov. 17 and 18, 1910.

We expect to have a number of the most prominent bee-keepers of the State, among them our worthy president, Mr. C. P. Dadant, as well as others outside our own State.

Among the other things that will be on the program will be the report of our foul brood inspector, A. L. Kildow, of Putnam, Ill., who will show on a map all the counties of the State wherein foul brood exists, as far as discovered.

Regarding hotel and railroad rates, a notice will be sent to all the members of the Association not later than Nov. 1st. To any not members, who wish to attend the convention, if they will notify the secretary, a like notice will be sent to them. Make up your mind to come and have a good time.

JAS. A. STONE, *Sec.*

Rt. 4, Springfield, Ill.

Convention Proceedings

The Albany National Convention

No doubt all the readers of the American Bee Journal who were not at the Albany convention of the National Bee-Keepers' Association are anxiously waiting to hear something about it. It was held Oct. 12 and 13, as announced. The Albany City Council Chamber, which holds about 250 people, was filled, and at some of the sessions there was quite a number of persons standing. It was a live meeting from start to finish. The program, as published in these columns in October, was carried out to the letter, with the exception of two papers in the morning session of the second day, which failed to appear. However, the Question-Box always filled in nicely whenever there was a shortage of papers to discuss.

Owing to a change in railroad rate at almost the last minute, the special car from Chicago did not contain as many bee-keepers as there would have been had the rate as first announced been sustained. As it was, there were 12 or 15 from Chicago and westward who enjoyed the trip together to Albany. It was a lively little bunch which were thus permitted to begin the 41st annual convention of the National 24 hours in advance of the published program. Those on the special car were as follows:

N. E. France and Jacob Huffman, from Wisconsin; Jas. A. Stone and wife, Henry Dadant and wife, the Editor of the American Bee Journal and wife, from Illinois; E. L. Hofmann from Minnesota; Messrs. Dittrich and Swails from Indiana; Dr. J. A. Smith from Iowa; and E. Davison from Kansas.

There were in attendance at the convention many of the largest and best bee-keepers of the East. Among the old-times were L. C. Root, of Connecticut; J. E. Crane, of Vermont; F. H. Cyrenius, Chas. Stewart, N. D. West, S. D. House, O. L. Hershiser, Geo. B Howe, W. L. and D. H. Coggshall, and many others, "too numerous to mention," from New York State; J. L. Byer, Morley Pettit, Wm. McEvoy, R. B. Ross, Jr., and J. J. Hurley, of Ontario, Canada; Wm. A. Selser, of Pennsylvania. But it is impossible to recall very many of the large number present without having a list of the names. At any rate, there were plenty of good convention men to make it an interesting meeting.

All the papers read were of a high order, and most of them were followed by very interesting and helpful discussions. The Question-Box was well patronized, and many profitable facts and suggestions brought out as a result.

The President's Address, which appears in this department, seemed to be well received, and important action was taken thereon. It was hoped that some of the suggestions made therein would bear fruit in the near future, to the great benefit of the National Association. Surely, the Board of Directors have an opportunity to act in several directions which should be to the advancement of the interests of all the members of the Association. We believe they will be glad to do their part in a way that will bring honor to themselves, and result in the National Association doing for its whole membership what it should do to justify its existence and the hearty support of the bee-keepers of this continent.

A spirit of harmony and good-will seemed to prevail throughout all the sessions of the convention. It was a brotherly, and, we may say sisterly, meeting, as there were quite a number of sisters present also, which lent a refining influence to the gathering. Very likely not every one present was entirely pleased with everything that was said and done, but no convention of 5 sessions is likely to be entirely free from some unfavorable criticism. But we believe, taking all together, the Albany convention was one of the best the National has held in a number of years, and that those who were permitted to be present will count it a memorable occasion. Surely, the meeting and greeting of so many new faces and friends interested in the pursuit of bee-keeping will always be an inspiration to those who were so fortunate as to be there.

A full report of the proceedings will be published in pamphlet form, as usual. Mr. Geo. Angus, of Canada, was the efficient shorthand reporter, and we believe he "took down" everything of importance as it came along during the progress of the program. We shall hope, from time to time during the next few months, to print in these columns the papers that were read, so that all of our readers may enjoy a large part of the program. But we would like to have every subscriber of the American Bee Journal become a member of the National Bee-Keepers' Association. The dues are $1.00 a year, but when joining through a local association it is only 50 cents per member. Such membership not only brings with it all the literature gotten out during the year by the Association, but connects one intimately with the largest organization of bee-keepers in America. General Manager N. E. France, of Platteville, Wis., is ready at all times to receive dues; and if some of the recommendations made at the Albany convention are carried out during the next few months, Mr. France should be kept very busy enrolling members.

During this month the annual election of 4 officers and 3 directors will take place by mail. Each member will receive a list of the names from which to select. This is a very important matter, and should have the careful attention of all who are entitled to vote. The very best man should be selected for each position. So far as we know no one is seeking an office, but no doubt whoever is selected will be glad to render the best service of which he is capable.

We believe few would say that the National Association has done all that it might have done for its members for some years past, but it seems to us that what we all should do is to work together in a way that will result in the National being placed in a position where it will render the best possible service to its members. This, we are certain, can be done; but it never will be accomplished by pulling apart or trying to weaken it. What is needed is the hearty co-operation and the best thought and action on the part of all concerned. We are optimistic enough to believe that within a year or two the National can be so transformed as to be unrecognizable even by itself. It has a large number of enthusiastic supporters, and we believe their efforts to try to do things worth while will be gladly seconded by the rank and file of bee-keepers throughout the whole country. The National Association should be placed in a position where it can be a real help to every member, and also to the bee-keeping world as a whole. To accomplish this is worth striving for.

Let us all do all we can to harmonize

every interest, and make the National Bee-Keepers' Association one of the grandest organizations on earth.

THE EDITOR.

National Bee-Keepers' Association

Address delivered before the 41st Annual Convention, held in Albany, N. Y., Oct. 12 and 13.

BY PRES. GEORGE W. YORK.

LADIES AND GENTLEMEN:—We are met in the 41st annual convention of the National Bee-Keepers' Association, in a city of great historic interest, as it is the oldest surviving settlement in the 13 original States, having been founded in the year 1614. Even "Yankee Doodle" was written in a house still standing, on the east bank of the famous Hudson River, opposite Albany!

We are met in one of the greatest honey-producing States of the Union; a State which contains, also, some of the best and most extensive bee-keepers in all the world. It is a State rich not only in honey-production but also in almost everything else that befits a civilization like ours. Surely, we who have come from a distance are honored here by friendships and associations that we will carry with us for many years after this meeting.

This convention represents the greatest association of bee-keepers ever gotten together in this country. While other countries may have organizations of larger membership, no doubt our Association represents a greater number of extensive honey-producers, and more pounds of honey produced annually, than any other similar organization in all the world. Hence, in many ways, the bee-keepers of this Associations are leaders in almost everything that makes bee-keeping worth while anywhere. Therefore there is a responsibility resting upon us that is upon no other class or country of bee-keepers. The question is whether we will measure up to our opportunities and responsibilities in the years come. If we are to do this, our organization will have to progress faster than it has done during the past few years. The things which this Association *has* done in years gone by will not continue its success in the years to come. The new times require new ways of doing things. The organizations of the future must be far ahead of those of the past, in what they do to advance the interests of their membership, or they will fail utterly. The question then arises, What can this Association do to help the large membership which it has secured, and produce for them the results which they have a right to expect? This is a big question. I do not feel that I am able to answer it fully, or perhaps even partially, but I am going to have the hardihood to leave a few sugestions with you, which, I hope, or at least *think*, may lead to something better in the months and years just ahead.

While the National Bee-Keepers' Association has done most excellent work for its members during its many years of existence, it seems to me the time has come when some advanced steps need to be taken. For a number of years its principal object has been that of defending its members in their right to keep bees in certain locations. Ignorant and jealous neighbors have often been "a thorn in the flesh" of some bee-keepers, but when their complaints were taken into the courts of law by the Association, we have won in nearly every instance, and rightly so. That very important feature, or object, of this Association is rapidly passing away. In other words, there is not now the demand for such defense, as *the right to keep bees* has become so evident that today it is seldom questioned.

As stated in Article 2 of the Constitution of this Association, its objects are: First, "to promote the interests of bee-keepers; second, to protect and defend its members in their lawful rights; third, to enforce laws against the adulteration of honey." The third of these objects is practically taken care of by the Department of Agriculture, which is enforcing the pure food law in a wholesome way. Then it remains for us to consider the *first* object, of "promoting the interests of bee-keepers." It is true the other two objects are in the interest of bee-keeping, but as they are taken care of, it seems to me that we should begin at this convention something looking toward the promotion of one of the still *greater* interests of bee-keepers. I refer to the disposition of the honey product, and advertising its use. This means a business organization more than ever.

In the first place, the Board of Directors, numbering 12, is too large, and they are too scattered. Three, or possibly five, capable men are sufficient. It takes too long now for the general manager to be permitted to do anything. He must first write and get replies from all 12 directors, and by that time it is probably too late to act. The experience of almost anyone is, that a *committee of one* is the easiest to get together to do anything! Of course, I would not advise a Board, or Committee, of only one, but I think that no one will question that a Board of three or five members would be more efficient, and accomplish all that a board of a larger number could do.

Second, our annual meetings can never be more than a small representation of the whole membership. State meetings can be fairly large, and can consider many things that would be of interest to the National Association. I would have the State associations *branches* of the National, and not merely, as now, individual members working independently. The State branches should elect at their annual meetings one or two delegates to the National convention, and then these National meetings should be a law-making body for the whole, and meet at some central place, the expenses being cared for out of the general fund. Suppose this present meeting were made up of delegates from all the States and Territories, who had been elected and given authority to represent their State and Territorial memberships; then we could have an attendance of about 100 of those most capable and most interested and, doubtless, the best able to consider the things of vital interest to the bee-keeping industry throughout the whole country. We must get away from discussing the *minor* things of bee-keeping at our great annual National conventions. The matters of the best way to produce honey. the best way to introduce queens, and the best way to do a lot of things in bee-keeping can best be left to the columns of the bee-papers, all of which ought to be taken and read by those who desire to accomplish anything worth while in bee-keeping. These National gatherings should be devoted to the larger things of honey-production. They should be business meetings throughout, and have to do mainly with the marketing and distributing of the honey crop, beeswax, etc. If bee-keeping is ever to be put upon a business basis in this country, there must be co-operation in marketing the honey crop. The producers of citrus fruits in California during the past ten years have simply worked wonders for those engaged in that line of business, and they have done it through co-operation.

The time is rapidly passing away when a single producer in any line can make a success all by himself. These are "get together" times, and bee-keepers have lost much during the past decade in not being properly organized so as to protect their own interests, and realize a proper return for their efforts in the production of honey. Again I say, leave the methods of production and the details in that line to the *bee-papers* of the country, but the larger and more difficult work—the marketing of the product—let that be controlled by a National organization made up of the branch organizations in the various States and Territories.

Third, we should all help to make the State conventions a great success. If possible, have some National officer, or officers, always present. Let the National get out the programs for the State conventions, or at least assist them in doing it. By unitedly working together, every State convention can be made "a hummer."

The honey-marketing question is surely a live one. The bee-papers can not deal with it in a practical way, as they are not in position to do so. As before mentioned, they can tell the bee-keepers *how to produce honey*, but when it comes to *selling*, it is another question. The beginner desires to know where to sell, and how much to charge for his product. This advice can be satisfactorily given him if someone is studying the markets, and thus is in position to know *how* to advise.

This is not a new thing I am talking about. The Colorado and Michigan Associations have been working along this line for several years, and they are gaining ground every year. The Ontario Bee-Keepers' Association is also making progress in the same way. Our National Association will soon have to "get in the swim," or it will pass away. It can't exist long now by simply drifting. There is no such a thing as standing still in an organization of this kind; it must advance or it is bound to retire. Will we stand by and see it go backward?

The time has come, I believe, when the National Association can well afford to employ a man to look after this work for them. One live man—*I say a live man*—devoting his whole time to organizing the bee-keepers of this country, could make the National Association go forward by leaps and bounds, and could in a very few years place the whole bee-keeping industry on a much safer footing than it occupies today. It cannot be done, however, on the small compensation offered at the present time. The dues must be placed at $1.00 a year and that would furnish funds for accomplishing the work. People are usually willing to pay what it costs to be well served. You cannot. for very long, expect to get something for nothing, as most men cannot afford to engage in the philanthropist business. It is true, we have had very unselfish and generous work done in the interest of this Association, but its membership should no longer expect that any man in these days can afford to devote his time and talents to advancing their interests without being paid for it, and *well paid,* at that. Brains and business ability cost money these days. and the bee-keepers of this country can well afford to pay for them. For when they are set to work, they are going to return to the individual bee-keeper tens of dollars for the $1.00 membership.

It is true that some radical measures will have to be adopted. No doubt the Constitution of this Association will have to be amended, so it will permit the doing of things that need to be done in the best interest of the members. If what I have suggested meets with the approval of the majority of those in attendance at this meeting, I would recommend the appointment of a committee for the purpose of suggesting amendments to the Constitution, and that before adjourning we take such action as will be necessary to bring about the changes in the Constitution that will permit the carrying out of what the best thought of this convention feels should be done in the future.

Without in any way suggesting a threat, I would like to say right here. that it has been intimated to me that unless the National Bee-Keepers' Association takes an advanced step along the lines I have indicated in the foregoing, another organization is likely to attempt to supersede the National. This, of course, none of us want to see done. The National should *lead,* as it always has led; but in order to continue doing this, it must adapt itself to the demands of progress and advancement that come with each succeeding year. Let us consider carefully things that will make for the greater success of bee-culture, and let us not hesitate to *go forward,* or at least to do what we can to advance *a little* the larger interests of our constituency—throughout the domain of our membership.

We are engaged in a wonderfully interesting vocation. Its methods and main product appeal to almost everyone. Where is the person who cannot be interested in the marvelous habits and occupation of the little, busy bee? I have personally held an audience of several hundred children almost breathless while I tried to show them, through the stereopticon, the wonders and glories of the hive. Any one can do that who knows anything at all definitely about the honey-bee and its honey. I believe it would pay this Association, when properly organized, if it can, at not too great an expense, to keep a good lecturer on the road, telling the people something about the the bee and its work, and incidentally emphasizing the high value of honey as a daily food.

When this Association is running as it *can* run, it will have ample funds for advertising honey in various ways. No doubt it can establish its own *brand*—that can be used by all the State or branch organizations throughout the country. With the wide co-operation that I have here suggested, who will say that every pound of honey produced *every year,* will not bring a higher price, and thus more profit to the producer? And not only will better methods of production be encouraged, but more honest grading and packing will be compelled. The brand of the National Bee-Keepers' Association placed upon any package of honey should be a guaranty that it is absolutely all right in every particular. It may be that there will have to be various centers in each State, where the crops of its members will be sent for proper grading and packing, and then be shipped in car-lots to the larger cities where a demand has been created in advance. A more equal distribution of the honey produced can be secured in this way.

If we can have one or two energetic, up-to-date business men devoting their whole time to the management of this organization, there is no reason why they should not know the condition of every large honey market on this continent, and thus be in a position to supply the markets properly, and bring about a more equal distribution of honey than at the present time, when often some of the markets are overloaded and others are unsupplied. This should not be, and need not be, if there is someone whose business it is to see that the honey product is distributed as the markets demand. This is done in other lines of production, and I see no reason why, with the proper co-operation and affiliation of local organizations, it cannot be done as successfully for the honey-producers.

But I must not go on longer. We have the field in which to work, but it needs proper cultivation. It needs wise and business-like management, in order to realize a just financial return for all the labor that has been bestowed in order to secure a large crop of fine honey. Bee-keepers are not selfish; they do not want more than their product is worth, but I insist that they *do want,* and *deserve,* a fair price as compared with other food-products, and this they are not getting today. I believe it is their own fault. No one will attend to our business for us; we must do that ourselves, or take the consequences. The consequences are often rather serious. Why not plan for the largest success, rather than be satisfied with something small, or less than can be obtained if properly done? While we are doing at all, we might as well do things *right.* We may as well magnify the business of honey-production. I believe we can easily do this by a system of co-operation and management, and I think the National Bee-Keepers' Association is the one organization that should make the first moves toward securing these important conditions and results among the bee-keepers of this continent. The questions to be settled are: Will we do it? Are we big enough to undertake this great work, or will we drift along as we have been doing in the years just gone by? I believe the time is opportune to take an advanced step. I realize that it cannot be done rapidly, as the best and most lasting things of this world are of slow growth, but I believe *we should begin to move.* And why not *this* be "moving day" along these lines?

GEORGE W. YORK, Pres.

Chicago, Ill., Oct. 10, 1910.

Action on President's Address

After an interesting discussion of the President's Address, on motion it was referred to a committee composed of Messrs. O. L. Hershiser, of New York; Jas. A. Stone, of Illinois, and Jacob Huffman, of Wisconsin, who at a later session presented the following resolutions which were unanimously adopted by the convention:

WHEREAS, The proceedings of this convention have been especially enriched by the able address of our President; therefore, be it

Resolved, That the many wise suggestions contained therein merit our most careful consideration and attention, and that it is hoped that they will be considered by every bee-keeper as especially addressed to him.

Resolved, That it is the sense of this convention that the Board of Directors of this Association take immediate active measures to the end that the points in the President's Address be brought before all local affiliated and non-affiliated bee-keepers' associations in the United States and Canada, for discussion.

Resolved, That it is the sense of the convention that the Board of Directors of this Association use its funds as far as possible in the employment of an efficient person to organize State and County associations of bee-keepers, to be affiliated with this Association, and in all other ways to advance the organization of bee-keepers

Resolved, That it is the sense of this convention that such points in the President's Address as look to amendments in the Constitution be commended to the Board of Directors for immediate action, and that they be earnestly urged to use what power they now have to carry out the recommendations in the President's Address.

O. L. HERSHISER,
JAS. A. STONE,
JACOB HUFFMAN,
Committee.

Field-Day of the Bee-Keepers of Massachusetts

BY WINTHROP PACKARD.

There are 2100 bee-keepers in Massachusetts. They were not all at the field-day of the Massachusetts Bee-Keepers Association, but enough were there to fill a big pine grove on the estate of one of their number, Mr. Henry Britton, of Stoughton, who is a banker by profession and a bee-keeper because he loves bees. Mr. Britton keeps bees in all sorts of places on his Stoughton estate. He has a "Bungalow Apis" in which fine Italian strains work in glass exhibition hives, where you may watch their admirable industry and note the results, see the cells built, the honey stored away and the young fed. He has hives in a long row under a special shed built for them, hives under trees about the place, a hive at the head of the stairs in his house, three in the attic and during a part of the field-day at least, he had a hive in his hat. This is not the customary joke about bees in the bonnet, either. It was a real hive of real bees, a small hive, to be sure, in a somewhat enlarged hat. A certain humorous whimsicality is always a part of the field-day exercises of this organization and adds a zest of hilarity to the otherwise earnest work of the meeting. To see and hear during the half-hour of relaxation—the precise president playing "Silver Threads Among the Gold" as a cornet solo, the host accompanying on a low-voiced trombone, while the bees flew busily in and out of his hat, was worth coming miles to see, and it is no wonder that the attendance was large from all over the State.

Bee-keepers are as busy and as much to the point as the bees they keep, and after a day spent with a grove full of them one buzzes back to the home hive fairly laden with the honey of concentrated information. Notable speakers addressed the gathering, among them Professor William P. Brooks, director of the Massachusetts Agricultural Experiment Station; Burton N. Gates, Ph. D., State inspector of apiaries; and E. Clinton Britton, president of the society. After listening to these and the volley fire of keen questions and equally keen replies that were scattered through the addresses as well as following them, seeing hives, the bees in full war-paint and with their working clothes all on, disjointed and their various bones, at least their frames, separated and passed from hand to hand without the workers missing stroke or the fighters getting one in on the assembly, one comes away greatly impressed with the intelligence and kindly spirit of both parties to the transaction.

BUSY BEE-KEEPERS OF MASSACHUSETTS.

Bee-keeping is on the increase in Massachusetts, both as a matter of profitable labor and as a hobby. There is the Western Massachusetts Bee Keepers Association, the Hampshire and Hampden Counties Association, the Worcester County Association, and so it goes, new societies interested in the gentle art growing up, as it were, over night, all proof of a renewed and progressive interest in bees and their work. The largest apiary in the State contains 200 colonies, and is managed more for the sale of working colonies than for the honey produced, though this is by no means an unimportant item. Where bees are kept with a view of producing honey, 35 to 40 pounds per hive is considered a good yearly average, but if you can add to the value of that from five to twenty-five dollars for the sale of colonies the earned increment per hive increases. If you can cajole your bees into producing a hundred dollar queen occasionally, that little helps. There are queens that are valued at that, though the ordinary queen sells for far less, the traffic in queens being in a limited way a mail-order proposition. You send your check and get your queen snugly tucked away in a cage, coming perhaps from half way round the world. Then with proper introduction to the hive the work of honey-producing goes steadily on while a new and improved strain of workers is bred.

Bees in the western part of the State are kept in the main for the honey that they produce, the Berkshires and particularly the western slope of this range, being equal to New York or Vermont in the quality of its "pasturage," New York and Vermont, all things considered, being among the best bee States in the Union.

One prime reason for this honey-producing excellence of this region is the prevalence and luxuriance of the white clover, in many ways the most desirable plant to have in the neighborhood of an apiary. In the eastern part of the State while the honey produced is an important item and the pasturage as a rule good, the best opportunities for professional bee-keeping come from the demand for bees by the greenhouse men, particularly those who have large cucumber houses. In winter the fertilization of the blossoms and the consequent success of the crop require bees, and one or more hives are placed in each cucumber house where the bees work all winter, to be discarded in the spring, usually worn out and worthless.

THE AMATEUR NEED NOT BE FINANCIALLY "STUNG."

The amateur who wishes to begin bee-keeping with one colony or more need not be discouraged by cramped quarters, or the fact that he does not dwell among fields of white clover and buckwheat. Bees, as we saw at the bee-keepers' meeting, will do business from an attic or a hat. All that they want is a chance to fly freely from their hive to honey-producing plants. Strange to say, the country itself is not a first requisite. One bee-expert found the roof of a brick block in the heart of the city of Washington a profitable place for his apiary, the bees finding pasturage among the linden trees and other shade trees with which the city streets are lined, and on the sweet clover which grows there plentifully in all waste places and by roadsides. A bee ranges in her daily quest for honey a distance of 3 to 4 miles and knows her business thoroughly. Turn her loose and she will find honey if there is any to be had within the score or so square miles which lie in reach around her hive.

Much careful investigation has been made by bee-keepers and scientific entomologists as to what constitutes the best plants for bee-pasturage. Understand, no bee-keeper can afford to plant crops for his bees alone. But if he is also engaged in practical farming he will, in making choice of plants for other purposes, plant those which are most desirable for his bees, other things being equal. Among these the clovers hold first place. The bee-keeper whose bees range over broad mowing fields and pastures in which the wise farmers have encouraged the clover should get large returns from his bees. White clover honey has the highest reputation in the market, especially where it is sold in the comb. So far as quantity goes buckwheat is a famous honey-producer but the honey from this plant is dark in color, and while its flavor is excellent the effect on the eye is discouraging. Hence honey brought by the bees from buckwheat is usually extracted, the honey and the wax being sold separately.

Among trees the basswood or linden yields a honey, white, well-flavored and wholesome. In localities where these trees have been planted for shade, bees do well. Raspberry honey is another especially fine variety, and in places where a large acreage of these small fruits is planted for market, bees thrive and the keepers thrive with them. It has been said that an acre of raspberries will keep a hundred colonies of bees busy for weeks. But a lack of any or all these plants in the neighborhood need not discourage the prospective bee-keeper. Nearly all plants yield honey and there is a constant succession of bloom in Massachusetts from the spring Mayflowers to the autumn asters and goldenrod, among all of which the bees find work and reward. So far as pasturage goes almost anyone may keep bees. You may trust them to find it, nor are they dismayed by trespass signs or fences however high.

THE BEST BEES IN THE BUSINESS.

The first honey-bees were introduced into this country from Europe some time after the first settlements, nobody knows just how long. Something over a hundred years ago bees had discovered the Mississippi river, and 50 years later the first colonies had reached the Pacific coast. In the earliest years the parent stock was the black bee of Germany. These bees were no doubt excellent for pioneers. Like the early settlers they carry their weapons with them and use them at short notice. The black bee is always ready to cure your rheumatism and suspects all strangers of having it. Usually each colony posts sentinels which fly to meet and inspect you. Then is the time to be sedate and commit no overt act, else you get that hypodermic application of rheumatism cure whether you need it or not.

Black bees are good honey-makers, and are vigorous and prolific, but their readiness to fight at the drop of a hat is causing them to be discarded in favor of gentler varieties. For this reason, especially, it is best for the beginner to start with a colony of the gentler varieties. There are many of these, Caucasians from the Caucasus, Carniolans from an Austrian province, Cyprians from the island of Cyprus, Syrians or "Holy Land bees," and Italians which were first introduced after the black bees, and to this day are most kept and held in the highest esteem. These, if handled wisely and tenderly, rarely sting anyone.

At the bee-meeting hives of Italians

were dissected, queens poked for, and frames with swarming hundreds passed from hand to hand without a sting. Many crosses have been made also between Italian and the other gentle varieties with good results. There is but one drawback to the Italians. They are a little less hardy than either of the other later introductions, requiring more careful protection during winter.

"Swarms" Now no Cause for Hysteria.

A time of great excitement for the beginner is when his colony first swarms. If he is wise he will be expecting this and will be prepared with a bee-veil and a hive in which to put the swarm when captured. Good advice in this matter is not to hurry. The bees will settle near the hive for a while and can usually readily be shaken or brushed into the new home. The once picturesque custom of ringing dinner bells and beating tomtoms is now declared useless as far as the bees are concerned. If it ever had any effect it was merely in occupying the attention and soothing the nerves of the bee-keeper and the neighbors. By more modern methods now adopted bees kept for honey are allowed so much space for the storing of it and the manipulation of queens that are new born in the hive is such that the colony grows strong and reswarm. On the other hand, the wing of the ruling queen is clipped, then, when the young queen is ready to take up the duties of the hive and the dowager departs with her retinue she is unable to fly, but drops near the hive entrance whence she and her followers are easily taken by the owner.

Bees have been watched and studied since time almost immemorial, and the sum of knowledge thus obtained is such that the skillful keeper manipulates them and directs their work in a hundred ways, to their good and his own profit. Modern invention has made of the hive an architectural masterpiece of use and desirability, and greatly lessened the labors and disappointments of the old-time bee-keeper. Among the ancients Pliny relates that Aristomachus contemplated bees for years, doing nothing else during this long period, and no doubt laying a foundation for the vast stores of wisdom which the modern bee-keeper can command concerning the insects. Pliny also mentions another pioner bee-student, one Philiscus, who retired to a life in the forest that he might better have opportunities for his favorite study. From that day to this wisdom in these matters has been steadily accumulating, and books on how to do it have been piling up.

The Department of Agriculture at Washington, among its multifarious industries, is still busily at work on latter-day problems concerning bees. To them the bee-beginner should apply for full information as to the details of his pursuit. They introduced the Italian bees in 1860, twenty-five years later the Carniolans, and since then other varieties have been imported. Our own State at the Agricultural Callege at Amherst has a large sum of useful information ready for the asking, and more than this, under a new law Mr. Burton N. Gates, Ph. D., has been appointed inspector of apiaries within a few months, his duty being to inspect all colonies, and find and stamp out disease wherever present.

Bee-Diseases.

This is one of the most important moves that the State has ever made for the good of bee-keeping, either as a business or an avocation, for without doubt this inspection will end in the eradication of one of the most serious troubles which bee-keepers meet. This is known as "foul brood." There are two forms of this malady, one known as European foul brood, which seems to prevail most in the western part of the State, the other American foul brood which is more common in the eastern counties. Like typhoid fever in man and cholera among swine, "foul brood" is due to a bacillus which affects the brood, and diminishes and soon stops the productivity of the hive. When a bee-keeper begins to have "bad luck," finds that his bees diminish in number instead of increasing, finds that moths get among his bees and that they do not make honey—in fact, when anything goes wrong and he does not quite see why, he has reason to suspect foul brood, and should write immediately to Mr. Gates at Amherst and state his trouble. Such a letter will bring at least a prescription and probably the doctor himself. This does not mean that the bees must be destroyed, though the disease will inevitably do that if not taken in hand. Both honey and bees may be saved by a little intelligent work and the right kind of care, and not only that, but the contagion may be prevented from spreading to other, healthy colonies in other parts of the State. It is for this reason that an inspector has been appointed, and for this and other reasons the bee-keeping industry looked brighter in Massachusetts.

Of course, other things than foul brood may be the cause of a light yield of honey in the hive. During many weeks of the last spring the bees found no nectar in the flowers and could not make honey. Cold and windy dry weather seemed to be the cause of this. Either the blossoms failed to secrete the nectar, or the dry winds dried it up before the bees could get at it. On the other hand, the advent of still, hot, humid weather is always favorable to the secretion and gathering of nectar, and since that set in the bees have been doing famously.

Bee-keeping is not laborious. For one who loves nature and light outdoor occupation, together with the companionship of busy, kindly creatures, it offers a fascinating avocation with modest but fairly sure returns for the labor and capital invested. There is room for a million more colonies of bees in Massachusetts and plenty of pasturage on which they may profitably work. There are always many people present at the bee-keepers' meetings who are beeless when they come. I suspect more than one of going away from the hearty hilarity, good fellowship and earnest discussion of the assembly, with at least one of the winged workers in his bonnet, to be later materialized in a thronging hive beneath the apple-tree, and perhaps later still into a whole string of them. —*Boston Transcript.*

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Bulk-Comb vs. Section Honey

Mr. Scholl, in the September number, shows us some pictures of comb honey, saying it is impossible to describe how beautiful it looks, and then says:

> "But if you can imagine how your fancy section-honey looks, you can get an idea of what we are trying to show in the pictures."

It is easy for those of us who have handled sections by the hundreds or thousands to imagine just how beautiful such sections look, and it is easy to imagine that those frames of Mr. Scholl look just as beautiful. But imagination doesn't stop at that; and one imagines, not so much how they look when in Mr. Scholl's possession, as how they look when brought to the view of the purchaser, or brought on the table of the consumer. A section, when put on the table, looks just as inviting as when first taken from the bees. But when those beautiful frames of comb honey that Mr. Scholl produces are brought on the table they have sadly deteriorated from their pristine neatness and beauty. At least that is the way imagination represents them, from the description given as to how they are treated.

One would imagine that the womenfolk of Texas would be vexed in their innermost housewifely souls to see the once immaculate combs come on the table a drippy, sticky mess. There are undeniable advantages in the production of bulk honey, but when it comes to the matter of something to make a beautiful dish on the table, the section of honey will always hold a place that nothing else can fill.

Bee-Dress for Women

For the benefit of my bee-sisters I will try to describe the dress I wear while caring for the bees. Bee-stings do not seem to poison me very much; and when I am stung I do not suffer from the sting, but am very angry at the bees, for I am very careful not to hurt them in any way. So when they sting me it makes my temper rise.

First, an old sailor hat, then cloth the width of the brim and as long in length; make a shirr string and draw close to the crown of the hat on the outside of the brim. Then a piece of wire-screening the size of the hat-brim, and sew it to the cloth, sewing the wire-screen on the side, or let the seam come on the shoulder. Next a good grain-sack, with a hole cut in the middle the length of the sack, the same size as the netting, about one inch deep and one foot long. Sew the netting firmly to this and cut out the under part of grain-sack like for the sleeves. Sew a welt on the bottom of the gown and run in some tape and tie at the waist. You draw the bee-dress down over the head, and there is no chance for a bee to get in.

Now a pair of men's gloves well coated with beeswax with a pair of old sleeves sewed to the top of the gloves, and a rubber band in the top to draw the sleeves over the bagging sleeves, and you are safe from stings.

While this dress is not ornamental it is useful. Bowing to a friend who was passing one day, his horse almost ran away, it was so frightened; but the dress is all right. I copied it from a description of a bee-dress in the Bee-Keepers' Review. Be sure to pin the hat on your head, for if the hat slips back and the wire-netting touches your nose, a bee will sting it through the netting, as I learned to my sorrow.

Ohio Bee-Woman.

This dress would afford ample protection, but wouldn't it be rather warm, especially in very hot weather?

Honey-Nut Fudge

Place in a granite saucepan 10 tablespoonfuls of extracted honey and the same quantity of cream, cooking for about 6 minutes after the mixture begins to boil, or until a white line appears around the edge when the candy is stirred, then remove immediately from the fire and stir in a speck of salt and a few drops of lemon-juice; meanwhile arrange in shallow pans layers of chopped nut-meats, and pour the hot fudge slowly over them, ornamenting the top before it hardens with chopped candied orange-peel.—*Selected.*

Wide Frames vs. T-Supers

Miss Mathilde Candler, that very practical bee-keeping sister, says in the Bee-Keepers' Review:

> I now use mostly wide frames and plain sections. Until within the last few years I used T supers exclusively, but I have gradually discarded them. The T-super is a good super, but in a locality where there is much propolis it requires too much scraping. The wide frames protect the tops and bottoms of the sections so they are as clean as when first put on the hive, except for a little bit along the edge; for as my supers are 5 inches high, I have to use ¼-inch slats in my frames. This is hardly thick enough; it allows them to sag a litle and thus gives the bees a chance to crowd in a little bee-glue along the edge. Three-eighths inch would have been better.

It seems a bit amusing that precisely the opposite should have been the case here. Miss Candler gave up T-supers for wide frames; after using wide frames for years we gave them up for T-supers! It seems that it is not locality, so far as propolis is concerned, for Editor Root counts this (Marengo) one of the worst of places for propolis that he knows. Certainly there is no scarcity of that article in its season, for probably it is the rule in all places that as the season advances the bees make more use of propolis, probably in anticipation of winter.

The amusing part is that Miss Candler prefers wide frames because of less propolis on the sections, and one of the chief reasons why we prefer T-supers is that it takes less time to clean the sections taken from T-supers. And no doubt Miss Candler knows what she is talking about from her standpoint, for she is a very level-headed sister.

It is true, as she says, that in the wide frames the tops and bottoms of sections are kept as clean as when put on the hive, except at the edges. On the contrary, the whole tops and bottoms are exposed in the T-super. But it should not be forgotten that during the first part of the light honey-flow, and indeed until well along in the season, the bees put propolis only where there are cracks that they think should be filled up, a plain surface being untouched by the sticky stuff. So it comes to pass that a large part of the sections in the T-supers come off as clean as when put on, edges and all, while the sections taken from the wide frames have the tops and bottoms daubed as far as the bees can push propolis into the cracks. And how far the little creatures can push bee-glue into a crack with their soft tongues—they do it with their tongues and not with their feet or stings, don't they? So you see the earlier tops and bottoms come cleaner out of the T-super.

The later sections, especially if very late, will be soiled all over the tops and bottoms in the T-super, while in the wide frames it will still be only the edges. But in our wholesale way of cleaning tops and bottoms it takes no more time to clean the whole surface than to clean only the edges. One can but wonder whether Miss Candler makes use of this advantage, or whether, when using T-supers, she cleans each top and bottom separately. In the wide frame, tops and bottoms can not be cleaned in this wholesale way.

Miss Candler thinks she would have less glue if her bottom-bars were ⅜ thick instead of ¼. Wonder if she would not be disappointed if she should try the thicker bottom-bars. None of ours were less than ⅜, and some of them were ½. But the bees crowded in glue a-plenty. No matter how thick the bottom-bars, unless the sections are crowded in so tightly that they can not be gotten out, the bees would probably crowd glue into the crack. And it is hard enough to get sections out of wide frames at best. There's one reason we prefer T-supers; it's so much easier to take sections out of them.

A Sister's Delight in Bees

If I do not accumulate a bank account from the proceeds of my apiary, I have a delightful time and an interesting hobby. I can hardly wait all the long winter to see how the bees are doing, and I take all the care of them while "John" sits in the house and peeps out the window at me, safe from all stings and harm.

But, oh, you ought to see "John" eat the honey! Ima.

Honey Shoe-Blacking

Add lamp black to inferior honey to such an extent as will allow the mass to be well stirred. Warm until softened and put in boxes. This preserves its gloss for a long time, prevents cracking, and preserves and softens the shoe leather.—*British Bee Journal.*

Canadian Beedom

Conducted by J. L. Byer, Mount Joy, Ontario, Canada.

Live-Bee Demonstrations at Fairs

> Many bee-keepers were extremely pleased to see what we believe is a new feature at the National Exhibition. The apicultural section of the Ontario Agricultural College was represented by Mr. Morley Pettit, and in his charge there was on view in addition to an 8-frame reversible extractor and gasoline engine, an observatory hive around which crowds collected all day long. At intervals Mr. Pettit gave practical demonstrations with a colony of bees in a bee-tent. Mr. Pettit's pleasant mode of conveying information to his audience was greatly appreciated.—*Canadian Bee Journal.*

It was the writer's pleasure to meet Mr. Pettit just as he was going into the bee-tent, and needless to say I was invited to go with him, and of course the invitation was promptly accepted.

One of the first requests from the surrounding crowd was that the queen be shown them. Mr. Pettit being engaged in showing combs of honey from the supers, he asked me to find the queen for them. In a few moments her majesty was found, and also the comb on which she was travelling around, was shown to the crowd.

It is really amusing to hear the odd questions asked, and I can readily understand that there must be considerable fascination in work like Mr. House undertakes each year at the New York State Fair. Certain it is that I plead guilty to having a desire for such work myself, and it is pretty certain that if I happened to blunder around the tent that Mr. House was demonstrating in, if an invitation came to enter, I would be quite sure to take the risk even if some few stings were the price of my temerity.

Aside from all personal like or dislikes of work of this nature, anything practical, like the work done by Mr. Pettit at the Fair referred to, is sure to be of great advantage to bee-keeping from an advertising standpoint; and it is to be hoped that this work will be continued from year to year.

Unsightly Honey in Stores

That Ontario has a large number of bee-keepers that can and do produce a fine quality of comb honey is a fact beyond controversy; yet the fact remains that there are a few in the business that need to improve a little in their methods if the good of the industry is to be considered. This fact was brought home very forcibly to me a few days ago, while looking through the honey display (?) of one of the large department stores in the city of Toronto. A number of sections of honey were displayed on the counter that were really a disgrace to be labeled comb honey, as in addition to having been badly broken in transit, they were smeared with propolis, poorly filled, and some of them had the centers and bottoms filled with buckwheat honey. Worst of all, was the nasty work of the lesser wax-moth, whose webs were plainly in evidence on a number of the sections. While surprised that any bee-keeper would ship such stuff to a city market, we were equally surprised to find that a firm with a continental reputation would tolerate such samples of honey on their counters. That such a state of affairs would exist in any other branch of their business, is hardly to be thought of, and it certainly shows that the honey-business has not received the same attention and study by them as has the other lines referred to.

Then, again, the extracted honey was anything but nicely arranged, and a number of jars of very poor samples were in evidence. Only a few hours before we had been in a few of the wholesale houses that handle honey, and each place had quantities of the finest honey to be found. This fact again seems to substantiate the idea advanced, that the large stores as yet have not reduced the honey-buying part of their business to the science that it really has in other lines, and this state of affairs certainly is not conducive to the interests of the bee-keepers as a body.

As a rule, the smaller stores have much finer displays of honey than have the large concerns; why this is the case is hard to explain, but certain it is that a little education along this line would not hurt the business of the large stores, and at the same time an absence of such stuff as we have described from the counters of these places, would be a decided advantage to the bee-keeping fraternity.

The Perforated-Top Tin-Pail for Feeding Bees

While the crop of buckwheat honey, in the main, has been lighter than last season, all reports received from bee-keepers in buckwheat localities go to show that the hives are heavier than usual after having the supers taken off, and as a natural result the feeding bills will not be heavy. In my own case, comparatively little sugar has been fed, and with the pleasant weather of the past two weeks, what feeding that was necessary was done up in short order.

After using nearly all kinds of feeders in the past, just now I have an idea that the 10-pound pails with perforated top is about the best all-around feeder that can be used. They are cheap, easily obtained by any one, and can be used on any style of hive with no danger of robbing. Then, again, the bees will take the food from them in any kind of weather, as the inverted pail can be placed on the frames right over the cluster. I have a number of Miller and other kinds of feeders, but from my present preference, all feeders for the future will be the simple pails. While they will not hold as much as the Miller feeder, yet this can be remedied by getting larger pails, if necessary, as one firm of manufacturers make a pail with a self-sealing cover that will hold 20 pounds.

While the principle of these feeders is not new, being used in the old pepper-box feeder, yet it is only of recent date that the attention was called to the idea of using the pails in the same way. Just who the originator of the idea was I am not quite certain without referring to back numbers of the Canadian Bee Journal, but if not mistaken the credit belongs to Mr. Ross, of Montreal. Whoever the chap was, I for one feel like tendering him a vote of thanks for the simple little kink that is such a source of comfort and convenience in the matter of doing any necessary feeding.

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

Marketing Bulk-Comb Honey

Last month I had something to say about the way bulk comb honey is packed for the market. It is my desire to tell in a few words something about marketing bulk-comb honey, or any other kind for that matter. We must have a market for what we produce, no matter what it is, to make the most out of our vocation. And we know of nothing better than constant advertising, constant pushing of our product, and putting it before the people in such a way that it will be an advertisement itself whenever the product reaches the consumer, who is our best customer.

Bearing this in mind since I began my bee-keeping 20 years ago, and keeping at this very thing all through this long period of time, it has been no trouble to work up a market for all the bulk-comb honey that I can produce with 1100 colonies of bees; yea, and the demand is many times over my supply each year, amounting to several car-loads that I can not supply after I have disposed of my entire output.

Not only have I each year increased the demand for my honey, practically more than doubling my output each year, but I have constantly striven to raise the price in accordance with other products, as far as that has been in my power. The only, yes, I say *the only* drawback in this respect that I have experienced, is the fact that nearly the entire bee-keeping fraternity is to blame that the prices are not a cent or two per pound higher than what is obtained for the honey crop at the present time. In other words, if it were not for the fact that the majority of the bee-keepers set the ruling price just so much too low, so that the others will have to follow their example to be able to sell their honey, the prices of our honey would be at least a cent to two cents per pound more than they have been all through the season.

Now, how do I know this? Simply from the fact that I can continue to sell my own honey for from a cent to two cents per pound above the regular prices reigning until some of the bee-keepers intrude upon my territory and sell for less than I do. I have had this experience time and again. After selling for months to persons who make repeated orders, I finally receive a letter stating that Mr. So-and-So has come into the market offering his honey at so much less, and why am I so far out of line of the regular market price? The general wind-up, however, I am proud to state, is something like this in most of the cases:

"We are not objecting to your price, as we are exceedingly well pleased with your honey, but if you can meet the prices quoted by the other parties we would like to have you do so. We are sending you another order herewith for so many more cases, etc." Or, "We note that honey is quoted at so much per pound by So-and-So, making your price about 2 cents out of line. We do not object to your price, considering your goods, but if you can make us a better price we would appreciate it; however, we would prefer to have your honey because we know what we are getting, even if we have to meet your price."

I have more than a dozen letters that end in a like manner. In one way it shows what an advertisement it is for me to put out a good class of goods, but *the main point* I wish to bring out is, that this goes to show that if the bee-keepers would keep to together with the price of honey, they could get more for their crop. What does it profit the bee-keeper, after he has worked hard the entire year producing a good crop of fine honey, to rush it off to market at a low price, just to get ahead of the other fellow in disposing of it?

In my extensive work I have found that it is not such a hard proposition to produce a large crop of honey and then dispose of it systematically and get good returns therefrom, as it has been made to appear, if we may judge from the numerous articles that have appeared in the bee-papers from time to time. But it may be that much depends upon the man. I have for several years received a better average price for my large crops of honey than the majority of producers here in the South. I have kept ahead of the majority from one to 2 cents per pound for a number of years. This amounts to quite a little sum or profit that would otherwise have gone to waste, practically, had I sold my honey cheaper. If we only figure this small amount extra, or above the regular prices on a large crop of 3 or 4 tons, it amounts to just a few hundred dollars a year more on the crop. Is not that worth thinking about?

There are several things that should be considered when it is desired to sell honey at a good price. Among the first is that of going out into new fields where honey has not been sold before, and in this way many places are to be found where honey has not been used by the people residing in those communities. After such a market is found, and the right kind of goods are delivered, it is no trouble at all to maintain the customers in such communities year after year, and that at a good price, as already stated. I have just such customers that bought their first honey from me more than 15 years ago.

And not only do those customers come back year after year, but if fair treatment is given them, and the right kind of goods are delivered to them, the news will spread, not only in the community, but in far-away places, from the simple fact that a good thing will advertise itself, and you can not keep it from doing so. In this way relatives a thousand miles away get in touch with you in regard to your product, and in turn another community is found where new customers will want your product. Although this works slowly, in time it increases as one's business increases, and the time comes when one has all he can do to keep up with the orders. That has been my experience from year to year. From a very small crop of less than 1000 pounds a year, over 50,000 pounds last year, and between 60,000 and 80,000 this year, I will have to increase my output to more than 100,000 pounds next season to keep up with the demand that has increased steadily from year to year. Even this year, as I am closing my packing season, I have orders that I can not fill, for several tons of honey.

In a subsequent issue I will give the readers in detail my method of shipping out all my honey: "Shipper's order, sight draft attached to bill of lading," and the advantages of such a method.

Do Bees Freeze in Winter?

We had something here in the way of a swarm of bees that may be a surprise to some readers, nevertheless it is true.

About the first of May, last year, a very large swarm of bees settled near one of our neighbors' houses, on some low limbs, and not being interested in them they were allowed to remain unmolested. They built combs, stored considerable honey, and wintered right in the open air where they first settled, in spite of the fact that the last was one of the coldest winters we have had in this State for many years, the thermometer registering as low as 6 and 8 degrees above zero on several occasions. The ground was covered with snow three times, and yet the bees of that colony on the limbs of the tree were as lively and quick to resent an intrusion, if molested. So we have concluded that bees seldom, if ever, freeze to death if they have anything like enough to live on, and if there are enough bees to make a cluster large enough to keep up sufficient warmth.

No doubt some who tried to poke fun at the writer several years ago for reporting finding a little pauper swarm on a dead limb without any combs or other protection of any kind, when the thermometer had been as low as 18 degrees above zero the night before (and yet the bees were alive and healthy), will want to know if this outdoor colony of last winter was not imported through either Peary or Cook from up near the North Pole! L. B. SMITH.

Rescue, Tex.

Sketches of Beedomites

E. B. TYRRELL

The subject of this sketch was born May 16, 1877, in Genesee Co., Mich. His interest in bees began with the purchase of his first colony in the fall of 1894. Ever since then he has been a devoted student of bee-keeping. Deprived of his father at the age of 5 months, the task of bringing up a mischievous boy fell upon his mother. Without financial means, making a living for herself and boy was little if anything short of a struggle. His beloved mother now makes her home with "E. B."

Before Mr. Tyrrell had quite finished high school, he concluded it was more profitable to cut stove-wood at 35 cents per cord with a schoolmate who is now Professor of Chemistry in one of the New York State colleges. This ended his college education.

In 1899 he became a member of the Ancient Order of Gleaners, a farmers' fraternal beneficiary association, and took up Deputy work for them that same fall. The membership at that time was a little over 8000. The second winter he took charge of a force of 5 deputies, organizing new lodges throughout Northern Michigan. His part of the work was selecting new locations, holding public meetings and organizing the lodges when ready.

E. B. TYRRELL.

In the fall of 1901 Mr. Tyrrell married Miss Maud Enos, of Vassar, Mich., and their wedding trip took them to the first bee-keepers' convention he ever attended—that of the National, held at Buffalo, N. Y., in connection with the Pan-American Exposition. (Since then two husky boys have become members of the Tyrrell family, age 5 and 7 years, respectively, who try their best to prove to their father, by their actions, just what a Herculean task his mother had on her shoulders when "E. B." was a boy!) His marriage, in a measure, spoiled his taste for Deputy work. However, after a very severe winter in which his losses in bees were heavy, he was tendered the position of District Deputy, which led up in a short time to that of State Deputy for the Gleaners, for Indiana. His present position—the one he has held since February, 1907—is that of Field Manager for the Order above mentioned, with offices in Detroit. The territory covered is in the States of Michigan, Ohio, Indiana, Illinois, and Iowa. Since Mr. Tyrrell took hold of this organization it has grown to a present membership of 65,000. Surely this shows hustle and executive ability of a high order.

During all this time Mr. Tyrrell has been to a greater or less extent interested in bees and bee-keeping. His home has always been in the country, with the exception of the last two years which have been spent in Detroit, where his work is now located. His experience in organization work, contact with city conditions in regard to markets, and his knowledge of bee-keeping and the bee-keepers' work, leads him to believe that the time is soon coming when a proper organization among bee-keepers will place them in absolute control of the marketing of their product.

Mr. Tyrrell is the very active Secretary of the Michigan Bee-Keepers' Association, where he has inaugurated a work that is beginning to tell most emphatically for the advancement of the members of that organization. At the Albany convention, held Oct. 12 and 13, he was nominated as a candidate for Secretary of the National Bee-Keepers' Association, as will be noted by the election ballot sent out to its members this month. That he would make an ideal secretary in any organition in which he puts his unusual vim and energy goes without saying.

We have had the pleasure of meeting Mr. Tyrrell personally several times, and have been exceedingly well impressed by the forcefulness of his character, and the great interest he is taking in trying to put bee-keeping on a more profitable basis. His work in connection with the Michigan Association thus far places him in the forefront as a leader in the activities of modern beedom.

Worth Many Times Its Price.

To one who takes an interest in honey-bees, the American Bee Journal is worth its price many times over.

Tacoma, Wash. P. A. NORMAN.

Contributed Articles

Sex of Eggs—Does the Queen Know?

BY C. P. DADANT.

It was about the year 1842 that Dzierzon first began to mention his discovery of parthenogenesis in queen-bees, or the faculty which queens have of laying eggs that will hatch without being impregnated. This was called a *theory* at first; it is now known as a *fact.* Not only have other noted scientists, Siebold, Leuckart and Berlepsch, made examination of the eggs of bees and ascertained that the eggs laid in drone-cells were absolutely without the spermatozoa of fecundation, but thousands of people have proven the so-called theory to be true by many different experiments. We, ourselves, have had queens become drone-layers by being reared at a time when there were no drones which they could meet. Those queens, born in November, in full colonies, were healthy and vigorous when spring came, but it was too late for fecundation, and the eggs which they laid as plentifully as mated queens do, hatched in drones.

By the way, this is a possible method for plenty of early drones in spring of the breed you desire. Make a strong colony or 2 queenless late in the season, when it is too late for the young queens to mate, and you will have a large number of drones from these colonies in early spring. But they must be reinforced from time to time with worker-brood after the opening of spring, or they would soon dwindle to a population of drones. They must also be provided with drone-combs instead of worker-combs, else the brood will be small drones hatched in worker-cells; for the queen, when she is a drone-layer, does not seem to have any choice of cells, and lays eggs as readily in small as in large ones.

A young queen, freshly fertilized, prefers to lay eggs in worker-cells. She rarely makes any mistakes, and avoids the drone-cells. Later in life, and especially at the latter end of the spring laying, she lays eggs indiscriminately in worker or drone cells as she comes to them, but always workers in small cells and drones in large cells. When accidentally the cells are of irregular size, cells of accommodation, or when they have been stretched and deformed under the weight of honey, the eggs laid in such cells usually hatch as drones.

When swarming time comes, and she becomes tired of laying, she earnestly seeks for drone-cells. The workers evidently recognize this desire of the queen, and at such times leave unfilled patches of drone-comb, in the midst of worker-comb filled with honey, so the queen may satisfy this desire.

Mr. Samuel Wagner, the founder of the American Bee Journal, and a great observer, had a theory in regard to the cause of impregnation of the eggs laid in worker-cells, for he did not believe that the queen knew the sex of her eggs. He thought that the worker-cell being narrow, the abdomen of the queen was slightly compressed when inserted in a worker-cell, and that this compression caused the impregnation of the egg by forcing some of the spermatozoa out of the spermatheca into the oviduct at the time of the passage of the egg. Drone-cells being wider, he held that the abdomen was not pressed, and the egg, unfertilized, hatched into a drone.

This very plausible theory was set at naught by the fact, noticed by practicing apiarists, that when the bees are building new combs the queen often lays eggs that hatch into workers by thousands, in cells just begun that are only rudimentary. This happens when the queen is very prolific, and the swarm is unable to keep up ahead of her in building combs. Those cells are finished as the brood progresses. This fact overthrows the theory of mechanical pressure as a factor of sex.

One thing is certain: The queen usually prefers to lay eggs in worker-cells, especially when she is young and vigorous. She evidently finds more pleasure in laying these eggs than those in drone-cells. When she seeks for drone-cells and avoids worker-cells she is tired of laying, and continues only because Nature presses her, for her eggs would drop like ripe fruit if she could not place them in cells. If a swarm be shaken on a black cloth, and the queen remains among the bees on that cloth for a few minutes, the apiarist can usually detect those minute white specks upon the cloth after the bees have entered the hive. Some old authors indicate that as a means of ascertaining whether the queen was among her bees.

The fertilization of the egg, whether it is due to the position of the queen in laying or by her will, undoubtedly results in a certain amount of pleasure, and that is why she prefers to lay eggs in worker-cells. But when the acting muscles are tired from a too protracted laying, then she feels the necessity of resting, and seeks for larger cells in which the egg passes out without impregnation. If there is will on her part, in the impregnation or non-impregnation of each egg, it must be due to a mere instinct, for no other living being knows beforehand the sex of its progeny, or has the selection of this sex. The queen is said to lay eggs in rudimentary queen-cells. I have never caught her in the act. It is strange that she should do so when she so eagerly destroys these queen-cells after they have been sealed by the bees. Her laying in such cells is evidently instinctive and unreasoned, a mere mechanical animal function.

That the queen usually prefers worker-cells until the season of breeding is far advanced hardly admits of a doubt. If you remove all the drone-comb in early spring, and replace it with worker-comb or comb foundation, the queen will continue to lay worker-eggs for weeks and months without apparent dissatisfaction. It is not until a large amount of brood has been reared and hatched that the workers will apparently understand the need of drones, or the desire of the queen for drone-combs, and will reserve these. I have often been told that the bees tear down worker-comb to rebuild sheets of drone-comb. In every instance where I have been able to trace this I have found that an error had been made. I do not believe that the workers ever tear down combs that are not defective, moldy, or filled with dead bees or rotten pollen, whether it is to change worker into drone, or *vice versa.*

If the bees were inclined to change combs by tearing them down and rebuilding them they would certainly do it when the trick is tried of removing all worker-comb and replacing them with drone-comb. This has been done by a number of persons, and always with the same result. Either the bees narrowed down the mouth of the cells to worker size, and then the queen laid worker-eggs in those narrowed cells, or, as was often the case, the bees deserted these ill-suited combs and sought another abode. I believe it may be stated as a fact, with exceedingly rare exceptions, that a queen will not lay worker-eggs in ordinary drone-cells.

The September number, 1910, of L'Apiculteur of Paris, contains a report from A. Brisset, who, wishing to try a theory advanced lately that large cells would produce larger worker-bees, took it into his head to give a swarm nothing but worker-comb in the hope that he might rear a lot of workers as large as drones, or nearly so. A bright idea, indeed! He met a total failure, and very humorously reported his discomfiture in that magazine, in order to show that many ideas advanced by enthusiasts often lack in practicability. Yet we need new ideas, for it is through these only that progress comes. So we must not discourage the "cranks" altogether, for once in a while they show us the way to better things.

Hamilton, Ill.

Wintering Bees on the Summer Stands

BY F. H. CYRENIUS.

Now that the time is here when we must prepare our bees for the winter, we must decide what these preparations will be.

A good cellar, if not too dry, will save from 5 to 15 pounds of honey per colony; and, on the other hand, the bees wintered outside seem to have a vitality when spring comes that those wintered in the cellar do not have.

I have always found a damp cellar, under a kitchen stove, much better than a very dry cellar near a furnace. I have wintered bees successfully in cellars where a stream of water ran through all winter, and where it would be so muddy that rubbers would be needed.

A light, thin, unpainted board or

blanket furnishes good covering. I know of no better protection for outdoors than forest leaves, and I am using with much satisfaction cheap boxes, about ¼ or ½ inch larger than the hive, filled with leaves, setitng down over the hives. These boxes should be made about 3 inches deeper than the hive, and filled with leaves, and with a follower—a board that will easily go into the box—placed upon the leaves; when I stand upon it to pack the leaves down in the bottom, about 3 to 4 inches deep of packed leaves. Care should be taken that the leaves are spread evenly, and that enough are used so that the leaves rest solidly on the frames, and hold the lower edge of the box from the bottom-board.

If the leaves are properly packed they will remain in the box when it is inverted and thus placed over the hive. A honey-board or blanket, a sheet of paper, or nothing at all, may be placed over the frames; the main point is to have 3 or 4 inches of well-packed leaves rest tightly upon the top of the hive with a stone on the cover. For my part, I leave on the zinc board, which is tightly sealed all around, which leaves a nice bee-passage.

Now, it is not the cellar, it is not the chaff hives, nor packing, nor fixing, that gives as a result successful wintering. It is something else. I have been surprised, many times, to see bees in old box-hives split from top to bottom so that the bees could fly out anywhere in the crack, resting on some kind of platform, exposed to all kinds of weather, with no protection whatever, and come out in the spring in fine condition. What does it mean? They had abundant stores and no manipulation; everything in the hive was arranged to suit the bees.

Of late years I make all preparations for wintering in July and August, seeing that all colonies have queens and abundant stores. Seldom do I loosen a frame in the hive to be wintered, from July until the next May or June, when the packing of leaves is removed.

For the suggestion of leaves for packing I am much indebted to Mr. S. D. House, of this State.

In my next I will tell some experiences in spring stimulating on the let-alone plan, or Nature's way.

Oswego, N. Y.

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Something About the Bumble or Humble Bees

BY G. M. DOOLITTLE.

"Papa says that what I call bumble-bees are properly humble bees. Is this right, Mr. Doolittle?"

"Yes, my boy, your father is right."

"Why do they call them humble bees? Are they so much more meek than the honey-bees that they are called *humble?*"

The above is a little conversation had with a neighbor's boy not long ago, and it set me to thinking whether I could please the readers of the American Bee Journal any better than to tell them something about those bees which have interested me all my life from my earliest boyhood recollections up to my 64 years of age. While my 40 years of bee-keeping life has been one of extreme interest with the honey-bee, yet I do not know that aside from the dollar-and-cent point of view, they have taken hold of my life to a greater degree than have the bumble bees. And I firmly believe that if any father will spend a little time with his boys in helping them to be interested in the humble bees, the wasps, hornets, and other insects which surround all who live in the country, these same boys will be less inclined to desire some place other than the farm when they are grown up; and will find these things far more interesting than the street-corner, the saloon, or that which brings them to jail.

Nothing is easier than to have a colony of bumble-bees right where you want it. Simply take up some forsaken mouse-nest so that the nest remains intact, place the same in any box that will hold a peck or such a matter, when a cover is to be put on the box and a hole bored through the box leading to the hole in the nest, where the mouse went in and out. Then along about the time the apple-trees bloom, when you see large bumble-bees looking into all holes and secluded places, this hole in the box will be spied out by one of these large bees, the nest taken possession of as a "home," and in a few weeks the worker bumble-bees will be seen going in and out, caring for the family, in a similar way to what the honey-bees do it, only as there are rarely more than from 50 to 200 bees in such a home, they do not go or come to such an extent as do the bees from a colony of those we keep for financial gain.

The only bumble-bee which lives over the winter is the queen or perfect female of this species. In this I am reminded how colonies of bees often dwindle down until only a few hundred remain in May and June; many times until only 5 or 10 bees and the queen, while in two cases which have come to my notice, the queen only was left alive; while in my queen-business I have often received through the mail cages, where every bee but the queen was dead, and she became as good a mother as those which had been cared for by good colonies.

But you may ask, "Does the bumble-bee queen have a colony with her at the commencement of winter, and such colony all die off so that only the queen is left?" No, every bee but the queens of a bumble-bee colony is allowed to die soon after the first frosts, she alone surviving.

"Well, how does she survive the winter, then?" This was one of the long-time puzzles to me, until one day in May I chanced to see a queen bumble-bee come up through a small hole out of the ground, when I believed they wintered over by going down into the loose soil where such could be found, going so deeply that they were below frost, and, when spring returned the warmth of the same brought them out of the hibernating state and the ground. But I was not positive of this till the spring of 1877.

In the late fall of 1876 I built my shop and honey-house combined over a piece of muck and sandy loam, one-fourth of the space covered by the building on the ground floor, being left open for the purpose of setting the steam engine there, while all the rest had the usual flooring over it. When "bumble-bee" time arrived, one warm day I was surprised to find 3 queen bumble-bees on the window where the engine was, and just then I heard another trying to fly, and on looking down near the engine I saw her just leaving the hole she had come from. I now went looking for the holes where the other three came from, and after finding two, and looking for the third I saw a little movement in the soil, when soon the head and then the body of another queen came out and flew to the window. I opened the window and left it open the rest of the day, knowing now for certain where the queen of the bumble-bees wintered. After finding some mouse-nest, a collection of moss, cotton batting or something of the kind suitable for a nest or home, this queen bumble-bee goes out and collects pollen in her pollen-baskets, the same as the workers of the honey-bees do, and in packing it away on the bottom of the nest she deposits an egg therein, then goes for more pollen, packs this on the first, and lays another egg in the mass. In this way she proceeds until she has laid from 5 to 8 of her eggs, this period of her laying often covering 2 or 3 days, according to the weather; although a bumble-bee can work in a lower temperature than a honey-bee can, as I have often proven by hearing them at work on apple-bloom when the mercury stood only 4 degrees above the freezing point on cool mornings.

After laying from 5 to 8 eggs, generally 6 or 7, she stays about this mass of pollen except to go out and collect some nectar for her existence and that of the young workers before they are old enough to forage for the whole family until within 3 or 4 days before they emerge from their cells, which they have made by spinning cocoons about themselves when changing from the larval to the pupa form. This nectar is put in a cup-shaped sort of a bowl made by the queen from pollen and a sort of fibrous material she procures from some source not known to the writer, which are mingled together until the bowl stands upright, and large enough to contain 6 or 8 drops to nearly a teaspoonful, according to the species to which the queen belongs.

About 4 or 5 days before the 5 to 8 workers emerge, she goes out again after pollen, which she spreads about the base of the cells containing the workers, and lays from 15 to 25 eggs along the base of these cells covering the eggs, using little if any more pollen for these 25 than she did for the first 8.

The workers, after emerging, partake of the stored nectar from the "honey-bowl," when in a day or two they are strong enough to go after the necessities of the home," which is mostly pollen to further store around the 25 eggs, so that when they hatch into larvæ they have plenty to feed upon. When the necessary amount for this is gathered and these larvæ begin to spin their cocoon cells more pollen is gathered, and the queen lays from 50 to 200 eggs for the third lot of workers, the number laid being according to the suitableness of their home and the season, a dry, warm season causing a larger number of workers, and a wet, cold one a less number.

When this "last litter" of worker-eggs have been laid and have hatched into larvæ, from 10 to 30 eggs are laid for drones, and a little later about as many for queens. These latter emerge from their cells a few days after the drones do, and generally during the last few days of August or the first days of September, when, upon arriving at mature age about 10 days later the queens go out to meet the drone, and upon becoming fertile they burrow in the ground to commence the next season the same as did their mother-queen the fall before. The mother-queen and workers die of old age, and also the drones which remain after the mating season, so that by the 1st to the 10th of October, in this locality, all bumble-bee life is extinct as far as seen by the eye of man. These bumble-bees are of great value by way of carrying the pollen from flower to flower in red clover fields, and for this purpose were exported from this country to Australia a quarter of a century or more ago at quite an expense to the Australian government, since which time their clover of the red variety seeds as well as it does in this country, if I am rightly informed.

The drones of the bumble-bees are stingless, the same as are the drones of the honey-bees, as most of our boys know who have caught them, calling them "stingless bees." There are a number of different species of these bees, varying in size from those little larger than the drones of the honey-bees up to those nearly as large as a small mouse.

Borodino, N. Y.

3.—Pointers on Selling Honey

BY WESLEY FOSTER.

When one has studied the art and science of salesmanship for some time he is quite liable to fall into the rut of thinking it is a profession different and set apart from other lines of work, but the same qualities that make for success in anything will win in selling goods. The trouble with the salesman is that he thinks of himself too much, and becomes narrow in his views. The true salesman is a man among men, and does his work efficiently and well, the same as others do. This sympathy and appreciation of the value and need of every human calling will make a man more effective in the sale of goods. Such a man does not impress one as being anxious to make a sale—he interests you entirely independently of his business; he is a man first and a salesman afterwards. I have heard some farmers make the best kind of selling talks, and do it all unconsciously; they come into the store of some man they know, talk crops, and trade, and prices, and casually the farmer mentions some of his own experience in raising some certain grain or vegetable—perhaps he tried several kinds, and finally found one that did especially well in his soil—the grocer or dealer, if he handled that article, would be in ripe condition to make a sale to, and in many cases asks the farmer if he could not have some of the produce. Confidence and knowledge here have a free course, and when there is confidence it is not difficult to sell goods, if there is any demand. The regular salesman has a harder time, for he generally has that ever-present prejudice against "agents" to overcome. In all the tasks a salesman runs up against, overcoming prejudice against "agents," and the persuading a man to buy "right now" while before him, are the two hardest things to accomplish.

This prejudice against agents has had its rise in former experiences with agents who have persuaded them to buy things for which they had small use. These generally come about by the agent dominating the mind of the buyer with his personality, or in popular phrase, "hypnotizing" his customer. Of course, people who know what they want and have a mind of their own, never fall into the hands of an unscrupulous agent, but there are many very fine people who can be influenced to buy things against their own good. Such must be handled carefully if steady customers are to be made out of them, for if they are persuaded to buy too heavily once they are not so easily won next time. With these people it is well to go slow and urge them to use their own judgment, and never be in a hurry to get away for fear the order will be cancelled. If the one selling feels that his customer is liable to cancel his order unless he gets away quickly, a going over of any vague or misunderstood points would better be done.

I have read instructions to salesmen in which they said to leave just as soon as the order was signed. This is the best course if the man is very busy, but the hurrying away with the order for fear the order will be cut down or cancelled is poor salesmanship. It is better to stay and fully explain than to get away with an order for goods that the customer does not fully understand.

It would surprise those who do not know from experience the number of men who will forget the selling price of an article. Many a grocer has called me over the phone to know the retail price on some honey that I had sold him. One would think that the one thing that a grocer would remember would be the cost, profit, and selling price, but many do not remember the selling price and the profit, and some get confused as to the cost price.

Dealers have so many salesmen calling on them that prices are confused. If I have a 10-cent seller that costs 95 cents a dozen, and a wholesale man comes in a few minutes after and quotes a corn syrup in tins at 85 cents per dozen; then a canned goods man quotes glasses of jelly and peas at 90, the grocer is very likely to think I quoted 10-cent jars of honey to him at 85 cents.

The sale of any article to a dealer or consumer requires that the salesman must carry the thought of the customer through a process of growth and enlightment about the goods and himself until the point is reached where the customer goes through several well-defined stages, which are variously termed, but we may call them here: First, a favorable impression which will command attention; from attention held for a little while we arouse interest; and interest soon develops into decision to buy.

In my experience a man will soon become interested, but I have been short on the ability to carry him over the place where he hesitates to give the order. The expenditure of money is a serious barrier to many men, and when a man is really interested it is well to force home the truth that it is but the investment of funds to bring more money. When every objection has been met ably there are not many men who will hesitate in buying honey if the quality is good, and the profit fair. A man who intends really to sell honey where it has not been handled before can not know too much about the product and kindred topics. There is a world of difference between the man who merely asks if you would not like some honey, and the one who asks you for several minutes of your time in which to show you thoroughly his whole proposition. You see the difference between the two methods.

In the first place, say I ask a man if he does not want some honey; if he does already want it I get an order, but I am not then a salesman, but am really only an order-taker. But suppose he does not want any, or says he does not; is he not judging entirely from insufficient evidence, having not had any time in which to find out further about your proposition? However, with the careful, thorough salesman it is different; he asks for a few minutes to show his line, and if there is no good opportunity then, why he waits till he can go over the whole thing carefully. He does not give his customer the responsibility of making a decision before all the evidence is in. Meeting objections is one of the things we who are not experts in selling greatly neglect. We do not dominate the discussion; we let the grocer enlarge on the difficulties in the way of selling honey till we are half persuaded ourselves that we can not sell honey in that town or territory.

I dare say that the selling of honey to the best advantage requires as much thought and preparation as the successful rearing of queens, and until we develop it into a science, with all the valuable points gleaned from experience at our tongue's end, we will not get the highest price possible for our product.

The sale of one's crop of honey begins when the honey-boxes are put on the hive, or the extracting combs placed there. The quality of the honey bears a closer relationship to a successful sale than the kind, for the kind of honey produced in any locality is the honey that generally is in most favor. A clear, thick, well-ripened table-honey is the only honey that should be sold in glasses or in the comb. There are some honeys that never should be offered to any market but the bakers, though this principle has not found favor among all bee-men, as every year I see markets injured by the sale of a baking honey to the grocery trade.

Uniform grades and attractive packages with labels bearing a distinctive brand, sold through a well-built-up selling plan, will help any man who goes out to build up a demand for honey. One thing that I have never seen worked out by bee-men that is a great success among other products, is the pushing of special deals at certain times of the year; say that with every 10 cases of honey bought at any one time we would give one free case, it would be a great incentive to handle a larger stock of honey, and the reason more honey is not sold in many a store is because the grocer has such a small stock on hand that it does not attract the attention of customers. If we could get some of the slow-going grocers stocked up on honey the way they stock up on canned goods, there would be a great deal more effort made to move honey. There are some objections to this, for honey in glass candies so readily, and comb honey is not easy to keep in nice shape. These disadvantages will be overcome soon, though, for grocers are fast learning to care for honey properly, and they will handle it as well as bee-keepers when they have to keep a good stock on hand to supply the demand coming from the consumers, when we get people accustomed to eating honey in larger quantities.

The whole thing for the bee-keepers to accomplish is an adaptation of the producing and selling methods of our large food canners and manufacturers to the individual and collective needs of the bee-men.

We must produce a better article; we must study the market and supply it with the class of goods that will sell to best advantage; we must follow business-like selling plans; we must get away from the wasteful competition of a dozen bee-men peddling their honey of various kinds and quality around in the same territory; we must realize trade conditions and know what relation other sweets bear to honey, and the effect of hard times on honey consumption; we must have a vivid realization of the importance of attractiveness, and an air of quality that inheres in a well-designed and tasteful label with the brand and bottler's or company name in plain type. In fact, if we are to get the big rewards for our work we must be progressive, and take on and adapt the new ideas that others about us are working.

We do not need to be original these days to succeed; in fact, safety lies in following the methods that have proven to be winners among lines of business similar to ours. It would not do any harm for the bee-keepers to send for the literature and deals that the corn syrup and glucose interests send out; they are certainly going after the business. Ever notice how they advertise their syrup when cool weather comes, right at the time when honey should go onto those hot cakes and biscuits? Advertisements covering valuable space in the magazines tell about corn syrup being the best spread for bread and hot cakes, and recipe booklets are sent out telling how almost every food can be better prepared by using corn syrup!

They send out demonstrators who carry on free demontrations in the grocery stores; then they send out men from house to house giving out samples, taking orders to be delivered through the grocer, giving pie plates, steam cookers, fireless cookers, etc., as premiums. Do you wonder that they sell immense quantities of their syrups when they can do such advertising and still give a pint can of syrup for 10 cents?

We have a product far superior in merit, and one that can be made the subject of effective advertising; in this respect we have the advantage over the glucose people—we can talk *quality*, which appeals almost as much as price. We have not the range of profit, but we have much that can be accomplished. When we have done what we can do at present, the chances are that the price of honey will be where we can afford to spend good sums in advertising.

Boulder, Colo.

Some Questions on Prevention of Swarms

BY DR. C. C. MILLER.

Whenever I see the name of D. M. Macdonald attached to an article, my interest is always awakened, and I was especially interested in a well-considered article contributed by him to the September number. Upon one point I wish he would give us more light.

He says: "The rearing of a virgin in the supers, and allowing her to depose the old queen, works favorably." Does he mean that he generally succeeds in getting such virgin to supersede the reigning queen? and can he do this early enough in the season to prevent swarming?

Mr. Doolittle has said that if a virgin is given after the harvest to a colony having a queen ready to be superseded, the virgin so given would become the reigning monarch. However successful this may be in his hands, I must confess general failure. I have no difficulty in getting a very young queen accepted kindly, but somehow within a short time she disappears. Even if I were successful in the fall, I might not succeed early enough to prevent swarming, although I have great faith there would be no swarming in a colony which would allow a virgin to supersede its laying queen early in the harvest. If there is some trick about it that I have not learned, perhaps Mr. Macdonald can help me out.

Mr. Macdonald says: "Generally, they are allowed some comb-building—an important desideratum, which, given, hinders a spirit of unrest from being generated."

I wonder, now, whether there is a difference in the two countries as to this matter of comb building. Supplying 2 or 3 frames of foundation, he says, frequently tides over the critical period. With me the critical period generally does not come until the bees begin work in the supers, and the comb building in a super of sections is equivalent to that in 3 brood-frames. When, therefore, the comb building in the supers amounts to as much as in 6 up to 30 brood-frames, one would think that the building of 3 frames in the brood-chamber would not make such a great difference Moreover, my bees show a strong preference for old combs, and I like to gratify their tastes. I never yet discarded a brood-comb for no other reason than because it was old. Still, that does not prove that giving foundation in the brood-chamber may not be a help toward swarm prevention, and as I think more about it I am more inclined to believe in it. Although I do not often put foundation in the brood-nest, I have put full-drawn empty combs there. The bees are likely to fill them with honey instead of brood, at least at first. They haven't the same chance to crowd the queen out by filling the foundation with honey.

Our friend says: "I have no love for cutting out queen-cells to suppress incipient thoughts of swarming. It is a messy job, and fails frequently." I've puzzled no little over those two sentences, and wish I knew just what he means. When he calls it a messy job, that sounds as if he literally cuts out the cells with a knife. But of course that can not be, for he is no raw beginner. Very little disturbance of a queen-cell is enough to make the bees empty it, and a thrust into the cell with a hive-tool is quickly made without any mussiness. As to its being a prevention of swarming, it can not be depended upon. Yet it succeeds in so many cases that I think a good deal more of it than I used to. This year there were not a few cases in which cells were killed only a single time, and then there was no further attempt at swarming. If a single colony can be prevented from swarming, and that colony then produces 100 to 200 sections of honey, I feel paid for all the cell-killing done in a number of colonies.

In one place Mr. Macdonald says: "I have 'shook' swarmed." *Et tu, Brute!* Such language from the scholarly Scotchman! I can forgive much, but—

Marengo, Ill.

Souvenir Bee Postal Cards

We have 4 Souvenir Postal Cards of interest to bee-keepers. No. 1 is a Teddy Bear card, with stanza of poetry, a straw bee-hive, a jar and section of honey, etc. It is quite sentimental. No. 2 has the words and music of the song, "The Bee-Keeper's Lullaby;" No. 3, the words and music of "Buckwheat Cakes and Honey;" and No. 4, the words and music of "The Humming of the Bees." We send these cards, postpaid, as follows: 4 cards for 10 cents, 10 cards for 20 cents; or 10 cards with the American Bee Journal one year for $1.10. Send all orders to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.

"Bee-Keepers' Guide"

This book on bees is also known as the "Manual of the Apiary." It is instructive, interesting, and both practical and scientific. On the anatomy and physiology of the bee it is more complete than any other standard American bee-book. Also the part on honey-producing plants is exceptionally fine. Every bee-keeper should have it in his library. It has 544 pages, and 295 illustrations. Bound in cloth. Price, postpaid, $1.20; or with a year's subscription to the American Bee Journal—both for $1.90. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
Dr. C. C. Miller, Marengo, Ill.
He does not answer bee-keeping questions by mail.

More than One Queen in Colony—Too Many Bees for Winter?

1. How did Alexander introduce and keep more than one queen in a colony? I have been unable to find out.

2. I introduced a fine queen in August, and no young bees showing up. I looked in Saturday to see what the trouble was. I found too many bees for the season, and the combs so full of honey and only one little space about an inch square for her to lay; she had this full of unsealed brood. Will it do to trust them this way, or should something be done? She looks to be all right. I winter my bees on the summer stands, but could put them into the cellar. Ohio.

Answers.—1. I can not give you particulars. But I can tell you how I did it. I introduced the new queen just as if no queen were in the hive. But the original queen must be old, that no fighting may occur.

2. Don't worry. In September or October brood-rearing generally ceases, and if you found plenty of bees and plenty of stores, the absence of unsealed brood need not trouble you.

Producing Honey for Home Use

I know very little about bee-culture, and would appreciate your advice as to the best manner of securing one or two colonies from which to get honey for home use? Georgia.

Answer.—Most railroads will not ship bees as freight, unless it be by car-load, and express prices are so high as to be practically prohibitive, so the only thing left is to buy a colony or two from some one near by. Even if the bees are not of very good stock, and not in the best kind of hives, you can in a short time change both bees and hives. This is true of bees as of no other kind of stock. If you have a hundred scrub chickens, and buy a trio of Buff Orpingtons, at the end of 2 or 3 years you will have no more pure Orpingtons than you would have had if you had not had a single one of the scrubs. But if you start with bees of the poorest scrub sort you can pick up, all you need to do is to put in each hive an Italian queen, and in 2 months or so every bee in your yard will be of pure Italian stock.

Still, it is no little trouble to transfer bees into different hives and to change the stock, and you may prefer to start in another way. Send off to some one whose advertisement you have seen, and buy a nucleus or two. The express charges on a nucleus are light compared with those on a full colony, and the nucleus may be put into a full-sized hive, where it will in a few weeks become a full colony. The frames in the nucleus will be of standard size, and the stock will be pure from the start.

Whichever way you choose, the first thing to do is to get a book of instruction upon bee-keeping, and make something of a study of it preparatory to making a start next spring, for it will be better to wait till bees fly then before making your purchase.

Helping Weak Colony With Bee-Tree Bees

I have some colonies of bees that are pretty weak. Can I take bees from a bee-tree and put them into a weak colony? I have found some bee-trees here. I would like to hear from you as I want to cut the trees, and don't like to let the bees die on the mountain. Pennsylvania.

Answer.—Yes, you can make use of the bees now in the trees to strengthen weak colonies. Just exactly how the minutiæ should be attended is not so easy to say without being on the ground. Possibly you may cut the tree so as to leave the combs unbroken, cutting off above and below where the bees are, so as to haul home the whole thing. In that case the part of the tree cut off would serve as a hive. Take a board large enough to cover the hive to which you are to add the new bees. If you haven't a single board wide enough for this, cleat together two or more boards. Make a hole in this board of any convenient size, 6 inches or more in diameter, no matter whether a square or round hole Take the cover off the hive, lay a newspaper over it, and put over the newspaper your board with the hole in it. Over this put your log-hive, put a cover on top, and plug up with rags or otherwise any cracks there may be, so that no bee can get out of the upper hive until the bees eat a hole through the paper. When the hole is first made it will be small, only one bee at a time will get through, and by the time much of a hole is made in the paper the bees will be united peaceably. Two or three days after bringing the bees home, or any time later, you can drive the bees out of the log, or cut the combs out and brush off the bees, allowing them to enter the hive, and your job is done. So late in the season it is not likely there will be enough brood in the log to bother with.

It may be, however, that you will not keep the combs in the log, but will cut them out and bring home combs and bees. In that case you will lay newspaper over your hive, set an empty hive-body over it, and then put in this empty body the bees and at least some of the combs, proceeding as before.

Plan for Prevention of Swarming

Upon reading the September issue of your paper, I again see that the bee-keepers are still as much in the dark as ever as to the prevention of swarming when running for comb honey.

As a natural born bacteriologist, and a bee-keeper combined, I have for many years made a special study of this question, and for two years past—1909 and 1910—not a swarm has issued from any of the yards where this has been in practice. My own few colonies, and my bee-keeper friends who have had access to the use of this plan (providing they keep it a secret) have received in the 4 yards (all averaged together for the year 1910) the amount of 140 pounds of comb honey to the colony, not a swarm, and not a colony weakened.

Not wishing to print a book on this plan so that the boys and masses of our country will have to pay a big price to get a little valuable information, how can I receive at least a small compensation for my trouble in writing out my plan in and illustrating for the American Bee Journal during the winter months so as to give plenty of time for bee-keepers to study this plan and send me any questions that they do not clearly understand? New Jersey.

Answer.—I don't know of any way to get paid for valuable information unless it be from some bee-paper.

[Why not write out your plan and submit it to one of the bee-papers, naming what you consider a fair price for your work and illustrations? None of the editors would use or print your ideas until he had your permission.—G. W. Y.]

Changing Queens—Bee-Diseases

1. I am a beginner in the bee-busines. I bought 8 colonies of bees from a man near here and have lost every old colony that the bees swarmed from. It seems as if the bees have no life—don't work. I believe the queens are no good—the breed has run out. I have mixed bees, Italian and black. I want to get at least 3 new queens when it is time, but I don't know how to get rid of the old ones, as in my colonies the queens are so small I don't think I could pick them out. Can you instruct me along that line? I will do as you say, as my bees don't work and they have a good field. I would like to have your advice as to how I can catch the old queens and put in the new ones.

2. Is there a disease that causes bees to quit work and dwindle away? Missouri.

Answers.—1. The probability is that you are mistaken about your queens being so small that you would not recognize them. Of course, however, you would be less certain of finding them than one with more experience. So if you want to avoid the hunting, you may sift them out. Put a queen-excluder at the entrance. Lift out the frames somewhat carefully, so as not to set the bees to running, of course taking the bees with the frames, and put them in another hive close by, leaving the old hive empty on the stand. Look in the old hive and see whether the queen is among the few bees that are left, although she is very unlikely to be left there. Now take the frames, one after another, brush all the bees from them in front of the old hive, and put the frames back in the old hive. The workers will pass through the excluder zinc, but the queen can not get through the perforations, and will be left outside, where you may dispose of her at your pleasure.

2. Foul brood or paralysis would have the effect you mention. But if either of these diseases were in your colonies they would hardly be strong enough to have swarmed. It happens quite often that after a colony has swarmed the young queen in the old hive is lost on her wedding trip, and of course the colony must then perish. One would hardly think so many of yours would go in that way, but still such a thing might happen.

Honey from Oats!—What Next?

What do you think of the following? A man told me to feed bees on threshed oats. He said, "Moisten it and then put the oats near them, and they will gather the finest honey out of it." I think it more of a joke than anything else. Illinois.

Answer.—I'd like to look in the face of the man who tells that, before trying to make a guess whether he is joking or in earnest. It hardly seems that any one could believe such a thing, and yet things have been believed about bees that are just as foolish. "Threshed oats" are specified. It would be interesting to know what would be the difference in the quality of the honey if the oats were fed in the sheaf. And would the honey be extra-fancy if "rolled" oats were fed?—[Or might not the *bees* be milder mannered, or less warlike, if fed on "*Quaker* oats?"—G. W. Y.]

Starting With Bees—Sweet Clover—10-Frame Hive

1. I want to go into the bee-business here in Massachusetts, and would like to know how many colonies I can keep and get an average of 30 pounds, both extracted and comb honey.

2. The land here is waste land with stones and stumps, and is covered with goldenrod and wild flowers, lots of wild blackberry and raspberry, but basswood and sweet clover are unknown here; but I will sow some sweet clover seed on such waste land that is a mile or two away. Which is better, white or yellow?

3. Which is the better hive to buy, the 8 or the 10 frame; deep or shallow?

4. If I hive a swarm and give them all worker-comb, will they tear some apart to make place for drone-cells? Massachusetts.

Answers.—1. I don't know. Depends upon the pasture. If there are only the honey-plants you mention, and these not very plenty, 20 colonies might be enough. But if they are plenty, and a reasonable amount of white clover besides, 100 might be nearer the number.

2. The yellow blooms from 2 to 4 weeks earlier than the white. It comes mostly in the season of white clover, and the white sweet clover comes about the close of white clover. So if you have a good yield of white clover, the white sweet clover will be of more value. If you have no white clover, then the yellow variety is better; and still better to have both kinds.

3. Like enough the 10-frame hive will be better for you. As you can use the same frames in each, it will be a good plan to try both before you get stocked up with a large number. Most bee-keepers prefer a frame of medium depth, the Langstroth, which is 9⅛ inches deep, outside measure.

An Interesting Lot of Questions

1. I have kept bees ever since I was 10 years old. I am now 52. I was born a few miles from where you live, at Cherry Valley, but father moved here when I was 4 years old. I can not get 50 pounds of comb honey to the colony here in Ohio. I am greatly surprised at the quantity of honey you get from your bees, and wonder if it is due to your superior ability in management, or whether it is due to locality. If due to management, perhaps I could get 100 pounds to

the colony here. So I ask you the question. Do others do as well as you in your locality? Do they get 100 pounds or more to the colony in the best years?

2. Does a colony of bees store more honey in sections if they are crosswise of the lower combs?

3. Do you think they will store more honey in a T-super than in the Ideal or Danzenbaker?

4. Do you still use the scale-board separator or fences?

5. What objections, if any, do you have to the fence and Ideal super?

6. I have not bred from my best queens nor destroyed my poorest queens, but tried to extend the life to all. About how much would I gain by attending to this matter?

7. Do you want foundation or old comb under the supers during the honey flow?

8. How do you like the Doolittle plan for producing honey, outlined in his book, "A Year's Work in an Out-Apiary?" Have you tried it? My bees do not carry the honey up into the sections, but cap it over and leave it below.

9. I have read your book, "Forty Years Among the Bees," with great profit, I think. Do you now use all methods given in the 1906 edition?

10. Do you consider forced queen-rearing (as used by those who transfer the larvæ) as good as natural methods given by you in your book? Are the queens as long-lived and as prolific? OHIO.

ANSWERS.—1. I do not know of others that do as well, although there is no one else in the vicinity that makes a specialty of bee-keeping.

2. No.

3. No.

4. I now use altogether the old, plain wooden separators.

5. Without mentioning any other objection, the fences are more troublesome to clean, and so are the plain sections that go with them, for it is easier to mar the honey in a plain section, and it topples over more easily when standing.

6. Hard to tell. If your bees are very good it might make very little difference. If some of them are very poor it might increase the yield 50 to 100 percent.

7. Old combs. Foundation would give whiter sections, at least sometimes, but it would cost more than it would come to.

8. I have never followed it strictly, but it looks all right.

9. I dare not answer that offhand with a monosyllable, for there is never a time that I am not trying something new, sometimes at considerable interference with the honey crop, but I don't now think of any serious departure from what is laid down in that edition.

10. In the hands of skillful men I don't see why just as good queens can not be reared by the methods in vogue among queen-breeders, but I don't see how they can be any better. But I would lay stress upon having cells started under favorable circumstances, with a good yield of honey, and in a colony in the humor for starting cells. No colony is too strong or too good to rear queen-cells.

Late Feeding for Winter—Early Spring Requeening

1. I never had my colonies in better condition than they were this season, running over with bees and brood, but on account of the dry season most of them will not have enough stores to keep them over winter. Quite a few colonies have about 2 pounds of honey each. Do you think I can bring them through by feeding them granulated sugar syrup? How many frames would it require for each hive, and of what consistency should I make it? I would like to feed it all at once. I have a good cellar, and they generally come out in fine condition, but I am afraid that sugar will not take the place of honey. I have some of the Alexander feeders, but do not like them for fall use.

2. I would like to requeen my bees as early as possible next season. How can I do it?

3. Strange I had a few colonies of bees this season with no better looking queens nor stronger in bees and brood, which gathered from 2 to 3 supers of honey.

NORTH DAKOTA.

ANSWERS.—1. Undoubtedly you can bring your bees through the winter on sugar syrup. Heat water on the stove, and dissolve in it best granulated sugar, being careful that it is not in the least scorched, as burnt syrup is death to bees in winter. Use 5 pounds or pints of sugar for every 2 pints of water. To prevent granulation some put in an even teaspoonful of tartaric acid for each 20 pounds of sugar. For fall feeding, and especially for feeding all at once, as you mention, you will find the Miller feeder excellent. Let each colony have 20 pounds or more of the syrup, deducting from that amount for any honey they may already have in the hive.

2. One way is to buy queens and introduce, the other is to rear your own queens. In the latter case do not make the mistake of trying to rear queens too early. You are not likely to rear queens worth anything except during a flow of honey. In white-clover regions it is generally well to wait till the flow from clover, yet in some places good queens may be reared where there is a heavy flow from fruit-bloom and dandelions. Your question is so indefinite that I can not be sure I have answered correctly, but if there is any point concerning the matter that you do not find answered in your bee-book, I shall be glad to have you ask further questions

3. Close observation will generally show such differences as you mention. One colony may be overflowing with bees, and yet not yield as much honey as another with a smaller force. Your part is to watch for such differences, and breed from the colonies that give the best yields.

"Untested" and "Tested" Queen

What is meant by "untested queen?" Also "tested queen?" MICHIGAN.

ANSWER.—The words "tested" and "untested" when applied to queens have almost universal reference to Italians. So a "tested" queen is one which has been laying long enough so that her worker progeny may be seen, said progeny showing 3 yellow bands. An untested queen is one which has been laying so short a time that none of her progeny has matured, and so there is no telling with what kind of drone she has mated, and there may or may not be more or less black blood in her worker progeny.

Winter Hive Packing or Covering—Knowing the Several Kinds of Cells and Bees

1. How should the winter covering (that is, quilt or blanket) be arranged on top of the frames? If placed directly on top will not the bees glue it tight, and will it not prevent an air-space?

2. Is the hive-cover placed directly on top of the quilt, or is a super used between them?

3. How can drone-eggs and larvæ in cells be distinguished from worker-cells?

MISSOURI.

ANSWERS.—1. In a cellar it doesn't matter. For years my bees have had neither quilt nor sheet, summer or winter. They are carried into the cellar just as they were on the summer stands. Outdoors some prefer quilts or cushions, and some prefer sealed covers; in the latter case plenty of warm packing on top of the cover. If a quilt is placed directly on the frames, the bees will, as you suggest, seal it down. It doesn't matter that this leaves no air-space, but the trouble is that it allows no passage for the bees to cross over from one frame to another. To avoid this trouble a stick is placed across the frames, or two small sticks near together, so that no matter how much sealing is done there will always be a passage left.

2. I think the majority of bee-keepers do not have any super on in winter, although some use a super containing a cushion or other packing.

3. An egg looks all the same, whether a worker or a drone is to come from it. So does a larvæ, except that the drone larva is larger as it grows older. But under normal conditions if you find an egg or a larva in a cell ¼ inch in diameter, you may know that it will produce a drone; if you find it in a cell one-fifth inch in diameter it will produce a worker.

How About Your Advertising?

Have you anything to sell? Any bees, honey, hives, or anything else that you think the readers of the American Bee Journal might want to buy? If so, why not offer it through our advertising columns? See rates in the first column of the second page of every number of the Bee Journal. We try to keep our columns clean and free from any dishonest advertising.

Reports and Experiences

A Good Report

When living in Elgin, Ill., I had 5 colonies (spring count), increased to 10, and sold $66 worth of honey, which was not so bad, and, besides, we had all we wanted, and some for our neighbors, too. I attended to them outside of business hours. I have kept bees for 5 years, and with all their faults I like them, and will try keeping them out here.

A. J. VOLSTORFF.

West Fork, S. Dak., Oct. 24.

Poor Season With the Bees

This has been a poor season here, about 20 percent less crop than 1909. The fall flow from asters is very light, owing to dry, windy weather. Fully 20 percent of my bees are now being fed sugar syrup for winter. However, we Virginians always hope for better times in the future, so we are looking forward to next year and hoping for a good crop. JOHN S. COE.

Winchester, Va., Oct. 24.

Not a Pound of Honey

This has been an "off" year in the bee-business, surely. I have not secured one pound of honey, although there has been heavy bloom on many honey-producing plants. There is a light flow from asters just now, but I do not expect any surplus honey. I had to feed almost all season to keep the bees from starving. More than half of the bees in this locality died in the spring, April and May being very cold and wet months. But we are keeping all our colonies in good shape, hoping for a good season next year. GRANT LUZADER.

Pennsboro, W. Va., Sept. 26.

A Beginner's Interesting Experiences

I started in the bee-business just last year, beginning by buying 15 colonies, all in 8-frame hives. As soon as people found out I was buying bees, they came to me from all over the country to try to sell to me. I gave for the first $1.25 per colony, with comb-honey supers, 6 of which were full of honey; then I bought 14 at $1.50 per colony with empty supers. A neighbor had 44 in frame hives, and 20 empty or moth-eaten hives, all furnished with comb-honey supers, which I got for $55. A saloon-keeper had 10 colonies out 10 miles in the country which he wanted to get rid of, and which I got for $1.00 each. These had both comb and extracting supers on, and all filled from top to bottom; the frames were not wired, but were started and straight. I also bought 18 colonies in box and frame hives for $15. This is all the buying I did.

I increased to 150 colonies last fall, and sold $654.75 worth of honey and beeswax.

Oh, yes! I bought some from a man who started in the bee-business, but a flood came on and drowned all his bees. I got his empty hives and supers (some of which never had had a bee in)—55 extracting supers, 38 comb-honey supers, and 37 hives all nailed and painted, for $20. This was a big help to me, when swarming time came, which is in April.

I did my first extracting July 4th, or started that day. Not being an expert, I took off only 20 gallons of honey from 7 supers, but the next day I did better. There were only 2 colonies of bees which had comb honey on that I kept track of. One gathered, up to Aug. 1st, 130 pounds, and the other 124. But I had to move them, and so lost track of the 2 colonies. I don't know what they gathered after that, but they brought in honey up to Nov. 15th. I did the last extracting Nov. 18th, and called it good enough.

This year the bees started to work Feb. 15th, on almond blossoms, and I thought I was going to have a bumper of a honey crop. I made hives and supers all winter to be ready for a big run. The bees did fine up to April 20th. Some of the comb-honey hives had on 3 supers, and the bees working in all, but not all filled. Then the bees began to hang out in great bunches on the front of the hives. Day and night they hung out. I thought they were preparing to swarm. They didn't do that last year. When I found bees hanging out I put on another super, and that settled that part of it last year. But it didn't make any difference this year. I tried everything I could think of to make them go in—smoke, ventilation, and even made artificial swarms, to my sorrow.

The 75 colonies of bees I had in one place (running for comb honey) just would not go to work. I went to pinch out the queen-cells, but found none. I read "A B C and X Y Z of Bee Culture." Finally I saw them killing off drones, so I read up on that, and came to the conclusion that there was no honey in the field, and so I let them alone for a few days to see what they would do. I found they were using up the surplus honey in the supers, and in a few more days there were no more larvæ to speak of. A friend of mine who came to look at them, said that those he looked at were queenless, as there were no eggs, but I gave them brood and they built no queen-cells. So I looked for the queens, and found them all at home.

The bees ate all the surplus honey they had. They became so weak that I had to double up a lot of them, and moved them to where the carpet-grass grows, and they went to work and filled everything full of the nicest honey I ever saw or ate. I am extracting it now, and have sold some to the local stores for 9 cents per pound. But it is getting so late now that the carpet-grass is going to seed, and the bees are working on the "turpentine-weed," as we call it. It is a small bush with blue flowers and is in full bloom now. It is the last of the honey-flow, the honey candies very quickly, and must be out of the combs not later than Nov. 15th. I couldn't get it out last year.

It is too late to do much this year, but I expect to do better next year. The old bee-men say they never knew a honey crop to fail, although some years are not as good as others; but this is "the limit." I guess I am a hoodoo. From my 150 colonies I got only 15 swarms, and they issued the latter part of March.

I could tell a lot more of my troubles, but as I am not much of a writer I will sit back and read what other bee-men have to say.

E. A. Howard.

Yuba City, Cal., Sept. 22.

An Old Bee-Keeper's Report

October 3d I will be 71 years old. I can do a fairly good day's work, and get from $1.50 to $2.00 per day. I wish I could have gotten this when I was young, and able to work; but *then* I had to work for 50 cents a day, and take that in corn at $1.00 per bushel. Well, I am getting away from my subject, I want to write about my bees.

We had a later spring here this year than we have had in many years. I had to feed my bees until the last of May. I had 12 colonies, but lost 9, which left me 3 to start with, and I have 9 now, all in good condition. They didn't gather honey until July 15. It was so cold and wet they couldn't work. Most of my bees froze to death, I think; I didn't protect them from the cold. They had plenty of honey and bee-bread. A man has to learn. I thought they would winter in a frame hive just as they did in the old log-gum. I am going to make a box and put over every one of them, leaving a 2-inch space around inside, and fill in with shavings; then put 2 feed sacks on top in an empty super.

We had a good flow of honey here from Aug. 1 until Sept. 20, from fall blossoms.

T. J. Cogar.

Lane's Bottom, W. Va., Sept. 26.

Removing Honey Rapidly from Hives

On page 285, Mr. Scholl describes his method of procedure in taking off bulk comb honey by the ton in an hour. He is a very up-to-date and progressive bee-keeper, and puts in use only methods whereby he can accomplish the most for the time invested; still, in that respect, he doesn't practice the quickest way. Some might say that taking a ton of honey off the hive and freeing it of bees in an hour is over the limit. It is manifest to me that it can be done, and more yet. I have struck an idea, and have put it in practice, whereby I can take off 100 pounds and free it of bees in one minute. This is not unreasonable. I have done it time and time again during the last two seasons. It works so quickly that the robber-bees hardly have an occasion to get started, which is quite an advantage over the brushing method, or any other that has come to my knowledge. Although can't say that my way is practical with the deep supers, on account of their being so heavy and clumsy, but it certainly is with the shallow super, which is my favorite. Here is the way in which I approach the matter:

Have the smoker in good smoking order; hold it in the right hand and the hive-tool in the left, then pry loose the cover and remove it; give the bees a good smoking, which causes most of them to leave the super. Then go to the next hive and proceed in the same manner until you have 3 hives uncovered, for 3 is the number I find the most satisfactory. Return to the first hive again and give the bees another smoke, and jerk off the super. After the super is off the hive hold it in a slanting position and jerk the lower end to the ground, keep on reversing and jerking, and in 5 or 6 jerks the super will be free from bees. All this is done in a "jiffy." It is done quicker than it is told. I have to move backward a little at every jerk so the super will not smash and kill the bees that have fallen from the last jerk.

Alfred L. Hartl.

Elmendorf, Tex., Oct. 7.

Dry Summer and Short Crop

My bees are doing well at this time. They are all strong. But the honey crop has been short on account of the dry summer. It was dry for 30 days, and the bees did nothing. They are in good shape for the winter, and I hope we will have a prosperous season next year.

J. R. Furlong.

Belcher, Iowa, Oct. 9.

Prices of Bulk-Comb Honey in Texas

Mr. L. H. Scholl writes about bulk-comb honey in the October American Bee Journal as if its price in 60-pound cans had been 10 to 11 cents all these years, which is a misstatement of facts. While it is true that some of the large producers sell direct and realize more, the large majority of the bee-keepers received, the last few years, 8 cents for bulk-comb honey in 60-pound cans. This year the price paid for bulk-comb honey in 60-pound cans was 9 cents; and 9½, 10, and 10½ cents for the smaller sizes.

Otto Sueltenfuss.

San Antonio, Tex., Oct. 24.

What's the Matter With Texas?

Mr. Editor:—Mr. Scholl, in the September number, wants to know where Texas stands, and thinks that because reports are seldom seen from that State it must either be that Texas is not needed, or else that it stands entirely alone.

To an outsider it hardly seems that either of those things accounts for so few reports from that great commonwealth, but rather that there is nothing to report, or else that there is not enterprise enough in its bee-keepers to send in reports. Instead of his asking we-uns up here why there are no reports, it is more like the right thing for we-uns up here to ask, "Why don't you-uns down there send in reports?"

I. Densy.

A Surprising Season

We have kept bees for 8 seasons, and have seen but little difference in the honey crop, each year being about the same. A cool spell of weather the latter part of August and the forepart of September suddenly stopped the bees from working for a while. Aug. 24th we had a snowstorm, and the 25th the bees swarmed. The snowstorm and the bees swarming the next day was a new one on me, but my whole life has been a round of surprises, and I have always found the unexpected the surest thing on earth. The bees here need less care than anywhere else I have been. We have now about 38 colonies, and I pay no attention to them whatever. All I do is to empty the supers and put them on again.

J. D. Kaufman.

Cody, Wyo., Oct. 19.

A Beginner's Experience

I bought one colony of bees June 13, 1908. This was the first movable-frame hive of Italian bees I had ever seen, and had never been within 2 feet of a colony of bees of any kind. I bought an "A B C and X Y Z of Bee Culture" and Gleanings, and later subscribed for the American Bee Journal, which I am now taking. I got one swarm and 30 sections of honey that fall. My bees wintered well. In 1909 I increased to 7 colonies, and got 131 sections of honey. I sold my bees last fall, and bought some again in the spring, beginning with 11 colonies, 2 of which gave me no honey or increase, or anything except a case of American foul brood, which I did not dream of being within 100 miles of me (Dr. Phillips says I was the first to report foul brood from Oklahoma), till I had it in 12 colonies. I tried to build up the weak colonies by giving them frames of sealed brood from others. I have treated successfully, I think, the 12 colonies have increased to 33, and have secured 560 sections of the finest alfalfa and sweet clover honey on earth, without exception. If you are from Missouri, come down and be convinced. When you consider that I have had no teacher, had to learn everything from my text-books and papers, and am continually making mistakes, and this, too, in a locality where my neighbors warned me against trying bees, saying they positively could not live here, you will pardon me for feeling proud of results. I believe an experienced bee-man (as I expect to be) could have doubled results this year.

I like Mr. D. M. Macdonald's articles on swarming, but was just a little bit stunned to see Mr. Metcalf's statement that bees never swarm on account of the heat, and that ventilation only retards swarming as it retards brood-rearing. If this is true, then all this talk about ventilation is wrong. I think when he reads that good letter from Mr. J. P. Blunk (the ex-miner bee-keeper), he will think differently. I agree with Mr. Metcalf, that when a man advises you to uncap brood to prevent swarming, you should hit him if he is not too big.

G. E. Lemon.

Nashville, Okla., Sept. 24.

Pretty Good Year—Honey-Dew

I think it has been a pretty good year for bees in this part of Iowa. I had 34 colonies, spring count, increased to 45, took off 5100 pounds of honey (or 150 pounds per colony, spring count), and have on hand about 30 brood-combs full for spring if I should need them, although the hives are brimful now, just as they were last fall, and I did not need any feed last spring.

I noticed in swarming-time, when taking a swarm from a box-elder tree, the upper side of the leaves were covered with a sticky substance, and that the grass under the tree was quite sticky. I took particular notice, but could not find any bugs or lice, and never saw a bee working on it. Was that honey-dew, or isn't it honey-dew until the bees gather it? White clover was in abundance at the same time.

We have had heavy rains lately. Although the summer was a dry one, I have never seen so much white clover. The prospect looks good for next year.

The American Bee Journal is a dandy.

Hull, Iowa, Oct. 7. Chas. Doan.

[It doubtless was honey-dew, all right.—Editor.]

Season's Report—Hot and Dry Now

My bees have given me very little trouble the past season (fortunately for my physical condition), about 500 pounds of honey from 33 colonies, spring count, and have increased to 35. I had only 3 swarms, and one went back and staid. A year ago last summer I had, at one time, over 70 colonies, sold 12, and my winter and spring losses reduced the number to 33. Honey is worth 18 cents per pound here now; at least it is bringing that amount to the producer, whether it is worth it or not.

It is very dry here now, and hot for the time of the year. Yesterday and the day before it was 84 degrees in the shade, and today it is nearly the same. The prospect for a honey crop next season is very good, as white clover is very plentiful.

I wish success to the "old reliable" American Bee Journal.

A. F. Foote.

Riceville, Iowa, Oct. 17.

Can't Do Without the Bee Journal.

Messrs. George W. York & Co.

Gentlemen:—Enclosed you will find my renewal for another year to the "Old Reliable." I simply cannot do without your paper, and I believe if I could not get it I would certainly have to give up keeping bees, so closely is it linked with my bee-keeping life. You can certainly count on me for life, as I get more pleasure and profit out of a single number of your paper than a whole year costs.

Walter E. Atkinson.

Baltimore Co., Md., Sept. 14, 1910.

International Bee-Congress

The following is translated by Mr. C. P. Dadant, from L'Apicoltura Italiana, of October, 1910:

The fourth International Congress of Bee-Keepers was held in Brussels, Belgium, Sept. 25 and 26, 1910. The attendance was very light, less than 60 apiarists or delegates being present. Only 3 sessions were held, of about 2 hours each. At the last session it was decided to hold the next of 5th Congress at Turin, Italy, next year in September.

Steps were taken to organize a sort of International Syndicate of Bee-Keepers, the members of which would be elected by the different National associations.

New York Bee-Keepers' Institutes

The New York State Department of Agriculture will hold a series of bee-keepers' institutes as follows:

Geneva, Dec. 12 and 13; Rochester, Dec. 14; Syracuse, Dec. 15; Ogdensburg, Dec. 16; Utica, Dec. 17; Amsterdam, Dec. 17.

These institutes will be conducted by the 4 State bee-inspectors, assisted by Dr. E. F. Phillips and other noted bee-keepers. The New York State Association of Bee-Keepers' Societies will hold their annual meeting at Geneva on the same dates as the institutes at that place. CHARLES STEWART, *Pres.*

Johnstown, N. Y.

Kansas State Convention

The regular annual meeting of the Kansas State Bee-Keepers' Association will be held in the Commercial Club Rooms at Topeka, Kan., Nov. 22 and 23, 1910. It is hoped that all persons interested in bees will be present. Several subjects of importance will come before the meeting. One of the principal things will be to draft a new foul brood law to take the place of the present County Law.

Topeka, Kan. O. A. KEENE, *Sec.*

Secretary of the National

I see that the Committee on Nomination at Albany, recommended as one of the candidates for Secretary of the National for the ensuing year, Mr. E. B. Tyrrell, of Michigan. Now, I haven't a word to say against other nominees, but I do know that Mr. Tyrrell is a hustler, and the members can not do better than to elect him as Secretary at this month's election.

Mr. Tyrrell is the present Secretary of the Michigan State Association, and during his term of 3 years the Association has doubled in number of members, and the likelihood is that the end is not yet in sight.

The success of the Association depends much upon its Secretary. Vote for Mr. E. B. Tyrrell for Secretary, and take my word for it you will not be disappointed. E. B. TOWNSEND.

Remus, Mich.

The nomination of Mr. E. B. Tyrrell for secretary of the National Bee-Keepers' Association bespeaks the good judgment of the convention, and is responsive to the good work he has done for the Michigan Association. Mr. Tyrrell is a resourceful man, and full of enthusiasm, good ideas and energy. His election will, to say the least, furnish the Association with an officer who will exercise despatch in all his work. L. AUG. ASPINWALL.

Jackson, Mich.

DUTY is always with us, as the atmosphere is always with us. And duty could crush us with the weight of the law, as the tons of atmosphere could crush us if it were an unbalanced weight. But as we bear the weight of the air, and feel it not, but live in it and rejoice, so we can live in the midst of our duties, not burdened by them, but performing them in a spirit of love so genuine that life finds abundant room for all its activities in service uncompelled. —*Wm. E. Barton, D. D.*

An Orphanage Appeal for Help.—The Editor of the American Bee Journal is the Secretary of the Board of Trustees of an orphanage or children's home located at Lake Bluff, Ill., 30 miles north of Chicago. He has wondered if there were not quite a number of the benevolently inclined among the readers of the American Bee Journal who would like to send that orphanage something either to eat or to wear, or even money, for the 140 children cared for there. They are all the way in size and age from infants to 12 years. The way to do is to ship by freight, *always* prepaying the charges. Perhaps we might suggest vegetables, extracted honey, oats and corn (they have a horse), clothing (new or good second-hand), etc. Any mother will know just what boys and girls 12 years or under will need to wear or to eat. It is the most economically managed institution of the kind that we know anything about. Many of the children there are for adoption. If you feel that you can, or would like to help such a worthy cause, send what you can spare from your abundance to Lucy J. Judson, Supt., Lake Bluff Orphanage, Lake Bluff, Ill., and please don't forget to prepay charges on what you ship. Also put your name and address on each package, and, if you like, write a letter to accompany it, either in the package or by mail. If you desire more particulars, write the superintendent.

Get More Eggs this Winter.—"Protein" is what professors call the element that makes eggs, bone, lean meat and feathers. This protein is found in large quantities in worms, bugs and insects. That's why your poultry get so much protein in summer—why you get so many eggs. But in winter it's different. Your poultry doesn't get much protein. Grain contains very little of it. Yet you must feed protein to them if you want more eggs from your hens and pullets, early maturity from your chicks and more vigor from your cocks.

It has been found that the same protein in worms, bugs and insects, is also in fresh-cut bone from the butcher's block. So thousands of farmers, poultrymen and farmers' wives, have actually doubled their winter poultry profits by feeding their poultry this fresh-cut bone. The cost of such feed is practically nothing—and the results are phenomenal.

A machine for cutting the bones, while very inexpensive, pays for itself in a month or two and lasts a lifetime. Mann's Latest Model Bone Cutter, for instance, is made of the finest materials, built right, through and through. It is self-adjusting to your strength—cuts fast, turns easy, and does the work right. It is sold by the manufacturers on 10 days' free trial, without a cent in advance or a penny's deposit. If you don't care to keep Mann's Bone Cutter, send it back at the Company's expense. We suggest that you write a postal now to the F. W. Mann Co., Box 348, Milford, Mass., for full particulars of their free trial offer, and a copy of their new edition of "Worms, Bugs, and Your Poultry Profits"—also their latest big catalog. There is no time like *now*. Kindly mention the American Bee Journal when writing.

Trapping Season is Near.—Men and boys who love to trap, and love of trapping seems to be inborn in most of us, welcome cold weather, because that is the open season for game. Those who have never made a "catch" are apt to think that trapping is merely setting and baiting the trap and then waiting for the animal to come along. He should know, however, that it is a battle of intelligence against the keenest kind of instinct. Many a beginner has set his traps carefully, only to find, when he made his rounds, the traps sprung, bait gone, but no game.

Few people have any idea of the thousands of dollars worth of furs that are shipped to market every year by men and boys who trap as a healthful, invigorating sport.

F. C. Taylor & Co., St. Louis, Mo., issue a reliable Trapper's Guide, which it will send to our readers free. It tells how, when and where to trap, has accurate illustrations of all the fur bearing animals of the United States and Canada, and a reliable diagram showing all the game laws of both countries. A special feature of the book refers to Animal Bait, and the facts there given are as important to trappers as traps. This Trapper's Guide will be sent free upon request to F. C. Taylor & Co., 30 Fur Exchange Building, St. Louis, Mo.

Best Christmas Gift for a Little Money.—Sent as a year's subscription to the Youth's Companion, $1.75 will buy the 52 weekly issues of The Youth's Companion for 1911.

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It will entitle the new subscriber for 1911 who sends in his subscription now to all the issues of The Companion for the remaining weeks of 1910 free.

It will entitle the new subscriber for 1911 to The Companion's Art Calendar, lithographed in 13 colors and gold.

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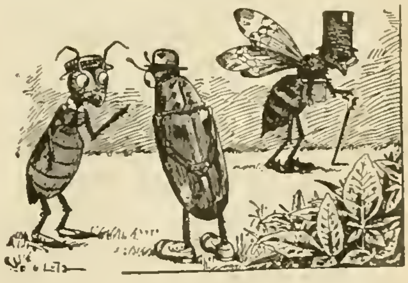

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"Oh, yes, he has written a treatise on Punctuation."

Wants, Exchanges, Etc.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

FOR SALE—160-lb. honey-kegs at 50c each f. o.b. factory. N. L. Stevens, Moravia, N. Y.

ITALIAN Untested Queens, 75 cents; Tested, $1.25. Breeders, $5.00 each. E. M. Collyer,
8A12t 75 Broadway, Ossining, N. Y.

WANTED.—Good salesmen to sell honey in city. The Snyder Bee & Honey Co.,
10Atf Kingston, N. Y.

FOR SALE—Duston White Wyandottes, $2; 15 eggs, $1; $5 per 100.
11A1y Elmer Gimlin, Taylorville, Ill.

WANTED—One 12-in. Gem Planer; 1 Dovetailing Machine. T. L. McMurray,
11Atf Ravenswood, W. Va.

WANTED—A few more 4 and 5 year old Queens; also bees—delivered in Chicago.
C. O. Smith, 5533 Cornell Ave., Chicago, Ill.

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FOR SALE—Golden Queens that produce 50 to 100 percent 5-banded bees. Untested, $1; Tested $1.50; Select Tes, $2; Breeders, $5 to $10
8A12t J. B. Brockwell, Bradley's Store, Va

FOR SALE—20 acres, apiary, fruit, truck or general farming; ½ mi. from city 10,000. Fine white clover and Spanish-needle section. With or without bees.
Geo. Bolze, Brookfield, Mo.

WANTED.—Sweet Clover Seed.—Submit sample with price, f. o. b. Chicago, stating amount, kind, etc. Address,
Arnd Honey & Bee-Supply Co.,
148 W. Superior St., Chicago, Ill.

WANTED—Some one who wants a good location for bees, to take up a homestead or Government land. I know a few nice vacant pieces. Address, Jas. M. Level, 8Atf
Yacolt, Clark Co., Wash.

WANTED.—To complete files of the American Bee Journal, parts of Volumes XXIX to XXXIV, inclusive. Any one having any of these to offer, please write to—
Morley Pettit, Guelph, Ontario, Canada.

FOR SALE.—200 8-frame hives of bees; honey-house 12x14; extractor, honey-tank, 100 extra hives and supers; 3 acres of land with 4-room house and barn. Price $2.75 per colony; extras reasonable. N. N. Atchley,
10A2t Rt. 1, Mt. Morrison, Colo.

BACK VOLUMES OF AM. BEE JOURNAL.—We have some on hand, and would be glad to correspond with any one who may desire to complete a full set. It may be we can help do it. Address, American Bee Journal,
146 W. Superior St., Chicago, Ill.

FOR SALE—Bee-hive factory cheap; good location; business well established 14 years; 2 railroads; 4 acres of land in the heart of a small town; 100 yards from depot, telegraph and express office. Southern States to sell to. A good chance for a good business man. Write for particulars and terms to—
11A1t D. W Switzer, Roebuck, S. C.

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WANTED — Choice extracted white and amber honey in barrels or cans. Send sample, and price delivered f. o. b. Preston.
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10A2t James McNeill, Hudson, N. Y.

FROM THE BEE-YARDS OF HENRY STEWART the thickest, finest-flavored white clover honey I ever produced. Put up and nicely labeled in

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"The Honey-Money Stories"

This is a 64-page and cover booklet, 5¾ by 8½ inches in size, and printed on enameled paper. It contains a variety of short, bright stories, mixed with facts and interesting items about honey and its use. It has 31 half-tone pictures, mostly of apiaries or apiarian scenes; also 3 bee-songs, namely: "The Hum of the Bees in the Apple-Tree Bloom," and "Buckwheat Cakes and Honey," and "The Bee-Keeper's Lullaby." It ought to be in the hands of every one not familiar with the food-value of honey. Its object is to create a larger demand for honey. It is sent postpaid for 25 cents, but we will mail a single copy as a sample for 15 cents, 5 copies for 60 cents, or 10 copies by express for $1.00. A copy with the American Bee Journal one year—both for $1.10. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

"The Amateur Bee-Keeper"

This is a booklet of 86 pages, written by Mr. J. W. Rouse, of Missouri. It is mainly for beginners—amateur bee-keepers—as its name indicates. It is a valuable little work, revised this year, and contains the methods of a practical, up-to-date bee-keeper of many years' experience. It is fully illustrated. Price, postpaid, 25 cents; or with the American Bee Journal one year—both for $1.10. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

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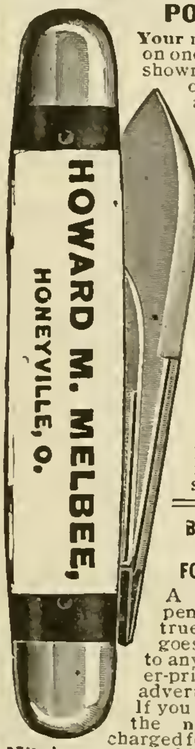
BEE-KEEPERS' NOVELTY POCKET-KNIFE



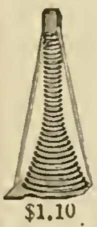
Your name and address put on one side of the handle as shown in cut, and on the other side pictures of a queen-bee, a worker, and a drone. The handle is celluloid and transparent, through which is seen your name. If you lose this knife it can be returned to you, or serves to identify you if you happen to be injured fatally, or are unconscious. Cut is exact size. Be sure to write exact name and address. Knife delivered in two weeks. Price of knife alone, postpaid, $1.25. With year's subscription, $1.00. **Free** for 3 new $1 subscriptions.

BEE-KEEPER'S GOLD-NIB FOUNTAIN PEN

A really good pen. As far as true usefulness goes it is equal to any of the higher-priced, much-advertised pens. If you pay more it's the **name** you're charged for. The Gold Nib is guaranteed 14 Karat gold, Iridium pointed. The holder is hard-rubber, handsomely finished. The cover fits snugly and can't slip off because it slightly wedges over the barrel at either end. This pen is non-leakable. It is very easily cleaned, the pen-point and feeder being quickly removed. The simple feeder gives a uniform supply of ink to the pen-point without dropping, blotting or spotting. Every bee-keeper ought to carry one in his vest-pocket. Comes in box with directions and filler. Each pen guaranteed. Here shown ⅔ actual size.

Price alone, postpaid, $1.00. With a year's subscription, $1.70. **Given free** for 3 new subscriptions at $1.00 each.

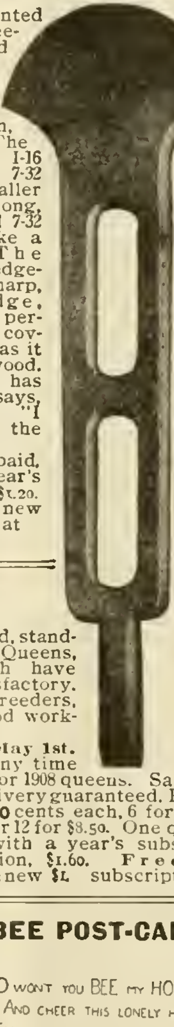
QUEEN-CLIPPING DEVICE



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. 4½ inches high. It is used by many bee-keepers. Full printed directions sent with each one.

Price alone, postpaid, 25 cents. With a year's subscription, $1.10. **Given free** for 1 new subscription at $1.00.

IDEAL HIVE-TOOL



Exactly half actual size.

A special tool invented by a Minnesota bee-keeper, adapted for prying up supers and for general work around the apairy. Made of malleable iron, 8½ inches long. The middle part is 1 1-16 inches wide and 7-32 thick. The smaller end is 1 7-8 inches long, 1-2 inch wide, and 7-32 thick, ending like a screw-driver. The larger end is wedge-shaped having a sharp, semi-circular edge, making it almost perfect for prying up covers, supers, etc., as it does not mar the wood. Dr. Miller, who has used it since 1903 says, January 7, 1907: "I think as much of the tool as ever."

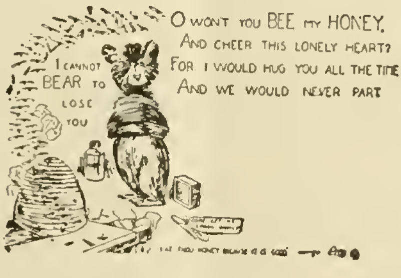
Price alone, postpaid, 40cents. With a year's subscription, $1.20. **Given free** for 2 new subscriptions at $1.00 each.

PREMIUM QUEENS

These are untested, standard-bred, Italian Queens, reports of which have been highly satisfactory. They are active breeders, and produce good workers.

Sent only after May 1st. Orders booked any time for 1908 queens. Safe delivery guaranteed. Price, **90** cents each, 6 for $4.50 or 12 for $8.50. One queen with a year's subscription, $1.60. **Free** for 2 new $1 subscriptions.

HUMOROUS BEE POST-CARDS


O WONT YOU BEE MY HONEY,
AND CHEER THIS LONELY HEART?
FOR I WOULD HUG YOU ALL THE TIME,
AND WE WOULD NEVER PART
I CANNOT BEAR TO LOSE YOU

A "Teddy Bear" on good terms with everybody including the bees swarming out of the old-fashioned "skep." Size 3½ x 5½, printed in four colors. Blank space 1¼ x 3 inches is for writing. Prices—3, postpaid, 10 cents; 10 for 25 cents. Ten with a year's subscription, $1.10. 6 **given free for one** $1.00 subscription.

BOOKS FOR BEE-KEEPERS

Forty Years Among the Bees, by Dr. C. C. Miller.—334 pages, bound in handsome cloth, with gold letters and design, illustrated with 112 beautiful half-tone pictures, taken by Dr. Miller. It is a good, live story of successful bee-keeping by one of the masters, and shows just how Dr. Miller works with bees. Price alone, $1.00. With a year's subscription, $1.75. GIVEN FREE for 3 new subscriptions at $1.00 each.

Advanced Bee-Culture, by W. Z. Hutchinson.—The author is a practical and helpful writer. 330 pages; bound in cloth, beautifully illustrated. Price alone, $1.20. With a year's subscription, $1.90. GIVEN FREE for 3 new subscriptions at $1.00 each.

A B C & X Y Z of Bee Culture, by A. I. & E. R. Root.—Over 500 pages, describing everything pertaining to the care of honey-bees. 400 engravings. Bound in cloth, price alone, $1.50. With a year's subscription, $2.25. GIVEN FREE for 5 new subscriptions at $1.00 each.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—How the very best queens are reared. Bound in cloth and illustrated. Price alone, $1.00. With a year's subscription, $1.50. GIVEN FREE for 2 new subscriptions at $1.00 each. In leatherette binding, price alone, 75 cents. With a year's subscription, $1.25. GIVEN FREE for 2 new subscriptions, $1.00 each.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook.—This book is instructive, helpful, interesting, thoroughly practical and scientific. It also contains anatomy and physiology of bees 544 pages, 295 illustrations. Bound in cloth. Price alone, $1.20. With a year's subscription, $1.90. GIVEN FREE for 4 new subscriptions at $1.00 each.

Langstroth on the Honey-Bee, revised by Dadant.—This classic has been entirely rewritten. Fully illustrated. No apiarian library is complete without this standard work by "The Father of American Bee-Culture." 520 pages, bound in cloth. Price alone, $1.20. With a year's subscription, $2.00. GIVEN FREE for 4 new subscriptions at $1.00 each.

The Honey-Money Stories.—64-page booklet of short, bright items about honey. Has 33 fine illustrations, and 3 bee-songs. Its main object is to interest people in honey as a daily table article. Price 25 cents. With a year's subscription, $1.10. GIVEN FREE for one new subscription at $1.00. Three copies for 50 cents; or the 3 with a year's subscription, $1.30; or the 3 copies GIVEN FREE for 2 new subscriptions at $1.00 each.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keepers' handbook of 138 pages, which is just what our German friends will want. It is fully illustrated and neatly bound in cloth. Price alone, $1.00. With a year's subscription, $1.70. GIVEN FREE for 3 new subscriptions at $1.00 each.

THE EMERSON BINDER

A stiff board outside like a book-cover with cloth back. Will hold easily 3 volumes (36 numbers) of the American Bee Journal. Makes reference easy, preserves copies from loss, dust and mutilation. Price, postpaid, 75 cents. With a year's subscription, 1.50. GIVEN FREE for 2 new subscriptions at $1.00 each.

WOOD BINDER

Holds 3 volumes. Has wood back but no covers. Price, postpaid, 20 cents. With a year's subscription $1.10. GIVEN FREE for one new subscription at $1.00.

BEE-HIVE CLOCK

A few of these handsome "bronze-metal" clocks left. Base 10 1-2 inches wide by 9 3-4 inches high. Design is a straw skep with clock face in middle. Keeps excellent time, durable and reliable. Weight, boxed, 4 pounds. You pay express charges. Price, $1.50. With a year's subscription, $2.25. GIVEN FREE for 5 new subscriptions at $1.00 each.

ALL ORDERS TO THE AMERICAN BEE JOURNAL, Chicago, Ill.

Gleanings in Bee-Culture for 1910--11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees, to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee Men at Work.

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How these Moving Pictures were Obtained.

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee-keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees,** and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb-honey production, **Mr. S. D. House, among his bees.** While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will also show a scheme for screening a honey-house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and Mr. O. B. Metcalf, of Mesilla Park, N. M., will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usuall grist of general bee-matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements.

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet-clover seed, *Melilotus indica*, postpaid. Do not forget that in order to get this seed **free you must send $1.00 before your subscription expires.**

To encourage old subscribers to secure new ones, we will send a one-pound package postpaid, of this yellow-sweet-clover seed to every one who will send us $1.00 for a new subscriber.

Yellow Sweet Clover—Melilotus Indica. What is It?

This, we believe, is a very remarkable honey-plant. We have been fortunate, we believe, in securing all the seed obtainable in the United States, and **we now have on hand something like s carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover *Melilotus alba*, except that the plants do not grow quite so tall, and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season, and much earlier than the other variety of yellow aweet clover,** *Melilotus officinalis*, **and much earlier** than the ordinary white sweet clover. It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa **or anything else.**

Do Not Delay Ordering.

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio.

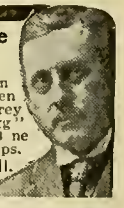
BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. HOOD RIVER, OREGON.

Please mention Am. Bee Journal when writing

I Will Tell You How to Make Your Hens Lay All Winter



Get into the 150 to 250 eggs a year a hen class. Make your hens winter layers when prices are high. You can do it the Humphrey Way. Send for book, "The Golden Egg" and Egg-making facts on the Humphrey Bone Cutter and other Humphrey Poultry Helps.
HUMPHREY, Amber St. Factory, Joliet, Ill.

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FENCE *Strongest Made*

Made of **High Carbon Double Strength** Coiled Wire. **Heavily Galvanized** to prevent rust. Have **no agents.** Sell at **factory prices on 30 days' free trial.** We pay **all freight.** 37 heights of farm and poultry fence. **Catalog Free.**

COILED SPRING FENCE CO.
Box 89 **Winchester, Indiana.**

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LEWIS BEEWARE — Shipped Promptly

—SEND FOR CATALOG—

Early-Order Discounts: —Sept. to Oct. 15th, 5%; Oct. 15th to Dec. 1st, 4%; Dec. 1st to Jan. 15, 3%; Jan. 15th to March 1st, 2%; March 1st to April 1st, 1%.

Applies to all except Honey-Packages.

Extracted Honey for Sale, and Wanted

Beeswax Wanted. 28c Cash—30c Trade,

ARND HONEY & BEE-SUPPLY CO. NOT INC.

(Successors to the York Honey & Bee-Supply Co.) **H. M. ARND, Proprietor.**

148 West Superior St., CHICAGO, ILL.

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Engravings for Sale.

We are accumulating quite a large stock of bee-yard engravings and other pictures used from time to time in the American Bee Journal. No doubt many of them could be used by bee-keepers in their local newspapers, on their letterheads, on souvenir cards, or in other profitable or interesting ways. If we can sell them it will help us to pay for others that we are constantly having made and using in these columns.

We do not have a catalog or printed list of the engravings, but if you will let us know just which you want we will be pleased to quote you a very low price, postpaid. Just look through the copies of the Bee Journal and make your selection. Then write to us.

GEORGE W. YORK & CO.
146 West Superior Street, - CHICAGO, ILL.

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American Bee Journal

CAPON TOOLS

CAPONS bring the largest profits—100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

G. P. Pilling & Son Co., Philadelphia, Pa.

Please mention Am. Bee Journal when writing.

DOOLITTLE'S "Scientific Queen-Rearing"

This is G. M. Doolittle's master-piece on rearing the best of queens in perfect accord with Nature's way. It is for the amateur and the veteran in bee-keeping. The A. I. Root Co., who ought to know, say this about Doolittle's queen-rearing book:

"It is practically the only comprehensive book on queen-rearing now in print. It is looked upon by many as the foundation of modern methods of rearing queens wholesale."

Mr. Doolittle's book also gives his method of producing comb honey, and the care of same; his management of swarming, weak colonies, etc. It is a book of 126 pages, and is mailed at the following prices: Bound in cloth, $1.00; bound in leatherette, 75 cents.

Special Clubbing Offer

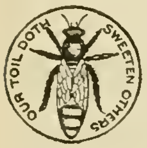
We offer a cloth-bound copy of this book with the American Bee Journal one year—both for $1.50; or a copy of the leatherette-bound edition, with the American Bee Journal one year—both for $1.25. The cloth-bound book given free for getting 3 new subscribers at $1. each; or the leatherette-bound copy given for 2 new subscribers.

Every bee-keeper should have a copy of Mr. Doolittle's book, as he is one of the standard authorities of the world on the subject of queen-rearing and everything else connected with bee-keeping and honey-production.

George W. York & Co., Chicago, Ill.

Celluloid Queen-Buttons

These are very pretty things for bee-keepers or honey-sellers to wear on their coat-lapels. They often serve to introduce the subject of honey, which might frequently lead to a sale.



OUR TOIL DOTH SWEETEN OTHERS

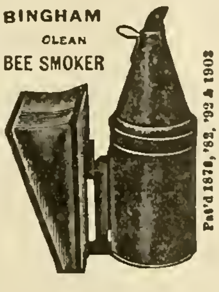
NOTE.—One bee-keeper writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of these buttons], as it will cause people to ask questions about the busy bee, and many a conversation thus started wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown above is a reproduction of a motto queen-button that we offer to bee-keepers. It has a pin on the underside to fasten it.

PRICES—by mail—1 for 6 cts.; 2 for 10 cts.; or 6 for 25 cts. Address,

GEORGE W. YORK & CO.
146 West Superior Street, - CHICAGO, ILL.

HAND-MADE SMOKERS



Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made	$1.50—4	inch stove
Doctor—cheapest made to use	1.10—3½	"
Conqueror—right for most apiaries	1.00—3	"
Large—lasts longer than any other	.90—2½	"
Little Wonder—as its name implies	.65—2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.

Patented, May 20, 1879. **BEST ON EARTH.**

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Bee-Keepers

Here is a bargain in No. 2
4¼x4¼ **1-Piece 2-Beeway Sections**
$3.25 per 1000. Plain, 25c less.

Send your order to-day. Also write for Catalog. 1Atf

AUG. LOTZ & CO.,
BOYD, WIS.

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Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.

Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

Please mention Am. Bee Journal when writing.

Are You Looking for a Bargain? If so, here it is:

100 Colonies of Bees, 8-frame, 1½-story hives, in good shape for winter. No disease. All go for $300.00, or in lots of 10 at $3.00 per colony. Bees near Argenta, Ark. Don't let this chance slip. **It is a bargain.**

W. J. Littlefield, Little Rock, Ark.

WANTED.—Thousands of both new and renewal subscriptions for the American Bee Journal during its Golden Jubilee Year. Why not each present regular subscriber send in one or two new subscriptions during the next 30 days?

Langstroth on the Honey-Bee

Revised by Dadant. Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. Bound in substantial cloth, and has nearly 600 pages. Revised by that large, practical bee-keeper, so well known to all bee-dom—Mr. C. P. Dadant. Each topic is clearly and thoroughly explained, so that by following the instructions of this book one can not fail to be wonderfully helped on the way to success with bees.

We mail the book for $1.20, or club it with the American Bee Journal for one year—both for $2.00. This is indeed a splendid chance to get a grand bee-book for a very little money.

GEORGE W. YORK & CO.
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When, Where and How to Trap

OUR new illustrated Trappers' Guide—yours free for the asking—is the biggest and most reliable guide published. Reveals valuable trapping secrets and the carefully guarded methods of successful trappers. What we tell you on Animal Baits is as important to any trapper as traps. Full directions on preparing skins for shipment and how to get the most money for them. This book will increase the catch of experienced trappers as well bring success to the inexperienced. The Game Laws of all the States and Canada are given in concise, unmistakable form, with the information you want shown at a glance. We will send you this book free if you write us before all the books are gone.

F. C. TAYLOR & CO.
Greatest Fur House in the World
30 FUR EXCHANGE BLDG. ST. LOUIS, MO.

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SUPERIOR BEE-SUPPLIES

Specially made for Western bee-keepers by G. B. Lewis Co. Sold by

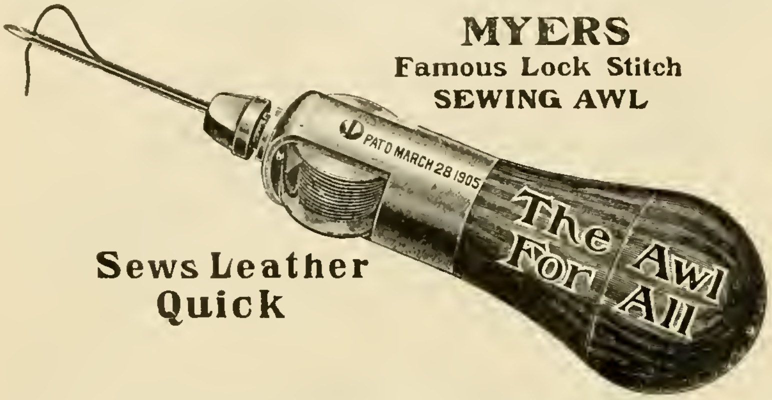
Colorado Honey-Producers' Association,
DENVER, COLO.

Please mention Am. Bee Journal when writing.

Myers Famous Lockstitch Sewing Awl

Is designed particularly for farmers' use, but it will be found a time-saver and money-saver in nearly every household. It is not a novelty, but a practical hand-sewing machine for repairing shoes, harness, belts, carpets, rugs, tents, awnings, canvas of all kinds, gloves, mittens, saddles, etc.; you can also tie comforts. The Awl proper is grooved to contain the thread or waxed end, and the point being diamond shape will go through the thickest of leather, green or dry, any thickness.

The "Myers Awl" can be used with either straight or curved needle, both of which come with the outfit, and veterinarians will find it indispensable for sewing up wire cuts in stock. The "Myers Lock-Stitch Sewing Awl" is a necessity for the people; can be carried in pocket or tool chest; nothing to lose, always ready to mend a rip or tear. Better than rivets because it is portable. Can be carried in mower or harvester tool-box, threshing kit, or anywhere. If you save one trip to town for mending, you are money ahead. Every farmer needs one, every man who teams needs one. It is the most practical hand-sewing machine for actual use ever devised. Put up with straight and curved needles, waxed thread, illustrated book of directions, and everything ready for use.



MYERS
Famous Lock Stitch
SEWING AWL

Sews Leather Quick

Our Special Offers of this Famous Sewing Awl.

We mail the MYERS LOCK-STITCH SEWING AWL for $1.00; or club it with the American Bee Journal for one year—both for only $1.60; or we will mail the AWL *free* as a premium for sending us only *Two New* Subscriptions to the American Bee Journal for one year, with $2.00. Surely here is an article that will be very useful in every home. Address all orders to—

George W. York & Co., 146 W. Superior St., Chicago, Ill.

HONEY AND BEESWAX

When consigning, buying,
or selling, consult

R. A. BURNETT & CO.

199 South Water St. Chicago, Ill

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Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

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MARSHFIELD BEE-GOODS

FRIEND BEE-KEEPER—We are prepared to fill your orders for **Sections.** A large stock on hand. Also a **Full Line of Bee-Supplies. We make prompt shipments.**

MARSHFIELD MFG. CO., Marshfield, Wis.

IOWA—J. W. Bittenbender, Knoxville, Gregory & Son, Ottumwa.
KANSAS—S. C. Walker & Son, Smith Center.
MICHIGAN—Lengst & Koenig, 127 South 13th St., Saginaw, E. S.
S. D. Buell, Union City.
NEBRASKA—Collier Bee-Supply Co., Fairbury.
CANADA—N. H. Smith, Tilbury, Ont.
ARIZONA—H. W. Ryder, Phœnix.
MINNESOTA—Northwestern Bee-Supply Co., Harmony.
ILLINOIS—D. L. Durham, Kankakee.
OHIO—F. M. Hollowell Harrison.
TEXAS—White Mfg. Co., Blossom.
WISCONSIN—S. W. Hines Mercantile Co., Cumberland.
J. Gobeli, Glenwood.

We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

We are in the market for

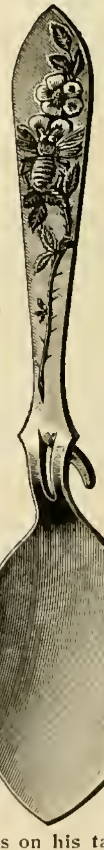
HONEY

Both COMB and EXTRACTED. State quantity you have to offer, with all particulars.

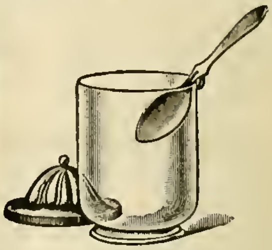
HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

Please mention Am. Bee Journal when writing.

An English Honey-Spoon



About three-quarters size.



Over in old England they have a handy honey-spoon, or at least a spoon that has a device in its handle that will prevent it from dropping down in the jar of honey on the dining-table, thus soiling the fingers and spoiling the table-cloth. It is a very ingenious idea, and should have extensive demand among honey-consumers, especially bee-keepers. It is well plated on high-class nickel, and has a beautiful raised design on the upper side of the handle, as indicated in the picture herewith. We have secured some of these very unique spoons, and will mail them at 90 cents each. Or, we will send spoon and the American Bee Journal one year—both for $1.75.

The spoon would be fine as a gift for Christmas, birthdays, etc.

The editor of the Bee Journal has used one of these spoons for a number of months in the honey-glass which is always on his table, and he would not like to be without this spoon again, as it is so convenient, and also unusual in this country. We can fill orders promptly now. You certainly would be pleased with this honey-spoon, and so would any one to whom you might present it. Send all orders to,

GEORGE W. YORK & CO.,
146 W. Superior St., - CHICAGO, ILL.

Honey and Beeswax

Chicago, Oct. 28.—The market remains firm at prices that have prevailed for the last month for both comb and extracted honey. The demand being nearly equal to the offerings which are unusual at this season of the year. A No. 1 to fancy white comb honey brings 17c per pound, with the lower grades from 1@2c less. Amber ranges from 12@15c, according to grade, flavor and cleanliness. Extracted, the white grades, 8@9c, with ambers from 7@8c, and the dark grade about 7c. Beeswax sells upon arrival at from 30@32c, according to cleanliness and color. R. A. Burnett & Co.

New York, Oct. 20.—The demand is good for comb honey, principally for No. 1 and fancy white, while the dark grades are rather dragging. Receipts have been quite heavy of late, and are likely to continue so for some time to come. We quote fancy white at 15c, with exceptional lots at 16c; No. 1, 14c; No. 2, 12@13c; dark and mixed, 10@12c, according to quality. Extracted in good demand at unchanged prices. Beeswax steady at 30c.
Hildreth & Segelken.

Kansas City, Mo., Oct. 28.—The supply of comb honey is liberal, and the demand only fair; supply of extracted is light, and demand good. We quote: No. 1 white comb, 24 section cases, per case, $3.25; No. 2, $3 00; No. 1 amber, $3 00; No. 2 amber, $2.75. Extracted, white, per lb., 7½@7¾c; amber, 6½@7c Beeswax, 25@28c. C. C. Clemons Produce Co.

Cincinnati, Sept. 17.—The demand for all kinds of honey is very good. Comb honey sells about as fast as the shipments arrive. The fancy grade sells readily to the grocers at 16@16½c; No. 1, 15½@16½c. For white extracted honey in 60-lb. cans we are getting 8½@10c. according to quality and quantity. Amber in barrels at 5¾@7½c, according to quality and quantity. The above prices are the selling prices. For beeswax we are paying from 28@30c a lb. for choice bright yellow free from dirt, delivered here.
The Fred W. Muth Co.

Boston, Oct. 20.—Fancy and No. 1 white comb honey, 15@16c. Fancy white extracted, 10@11c. Beeswax, 30c. Blake,-Lee Co.

Denver, Sept 16.—We quote new comb honey in a jobbing way as follows: Strictly No. 1 white, per case of 24 sections, $3.60; No. 1 light amber, $3.35; No. 2, $3.15. Extracted honey, white, 8⅓c per lb.; light amber, 7½c; strained, 6¾c We pay 25c per lb. for average yellow beeswax delivered here.
The Colo. Honey-Producers Ass'n,
F. Rauchfuss, *Mgr.*

Zanesville, Ohio, Oct. 20.—Honey is in fair demand. For No. 1 to fancy white comb, producers should receive 15@16c, and for best white extracted 8½@9c, delivered here. Prices in small lots to retail grocers, run 2@3c higher than these figures on comb, and 1@1½c on extracted. For beeswax, producers are offered 28c cash, 30c in trade. In wholsale quantities beeswax brings 32@35c, according to amount ordered.
Edmund W. Peirce.

Cincinnati, Oct. 28.—The market on comb honey is very firm, prices ranging in a wholesale way from $3.75@4 00 per case for No. 1 and fancy. Off grades are not wanted at any price. Amber in barrels is selling at 7c; in cans, 7½@3c. White extracted honey in 60-lb. cans, 9@10c. California light amber, 8½c. Beeswax is in fair demand at $32 per 100 lbs.

These are our selling prices, not what we are paying. C. H. W. Weber & Co.

Indianapolis, Oct. 28.—The demand for best grades of white honey is brisk. Jobbers are offering fancy white comb at 18c; No. 1 white at 17c. Finest extracted at 11c, with some slight reductions on quantity lots. It is to be presumed that producers are being paid about 2 cents less, per pound, than above prices. Amber honey is in poor demand here. Producers of beeswax are being paid 28 cents cash, or 30 cents in exchange for merchandise.
Walter S. Pouder.

FALCON FOUNDATION

Years of Experience in the manufacture of
FALCON COMB FOUNDATION
have made it PERFECT.

Hives, Supers, Sections
Made by "FALCON" Methods.
(Send for our Catalog.)

Ship us your
BEESWAX
to FALCONER; N. Y.
Will send shipping-tags, when you write asking for quotations.
We pay highest market prices.

W. T. FALCONER MFG. CO.
FALCONER, N. Y. (near Jamestown)
The same place for nearly Forty Years, only we now get our mail at the post-office a few doors from our Factory.
Please mention Am. Bee Journal when writing.

Wanted —Old Combs and Slumgum. Will work it for half and pay 30 cents a pound for your share of wax. A. A Lyons,
8A12t Rt. 5, Box 88. Ft. Collins, Colo.
Please mention Am. Bee Journal when writing.

HONEY WANTED

When you have any to offer, let US hear from you.
If it is Comb Honey, state how it is put up, and the grade;
If it is Extracted, mail us a Sample and state your lowest price delivered Cincinnati.

We can use any amount, and are always in the market

C. H. W. Weber & Co.
2146 Central Avenue, Cincinnati, Ohio

BEE-KEEPERS OF THE NORTH

BEE-KEEPERS OF THE WEST

BEE-KEEPERS OF THE EAST

Is Your crop of White clover Honey Short? We can furnish you

ALFALFA HONEY

Both White and Water-White. Finest Quality. Prices quoted by return mail, and Shipments made Promptly.

BEESWAX wanted for Cash or in Exchange for Bee-Supplies.

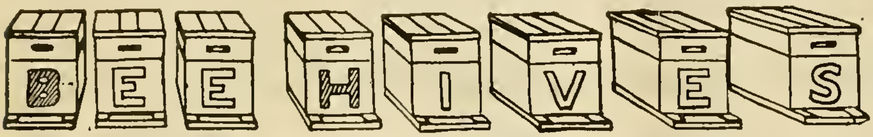
Beeswax Worked for you into **Dadant's Foundation** Best by Test. Let us send you proof.

Early Order Discounts now offered for Cash.

Satisfaction Always Guaranteed.

DADANT & SONS, Hamilton, Illinois.

BEE-KEEPERS OF THE SOUTH



Are our **Specialty.** We furnish such extensive bee-keepers as E. D. Townsend and others. Consider getting your bees into **Protection Hives** this Fall. Give us list of Goods wanted.

A. G. WOODMAN CO., Grand Rapids, Mich.

Please mention Am. Bee Journal when writing.

50,000 Copies "Honey as a Health-Food" To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed free at the bottom of front page on all orders for 100 or more copies.

Address all orders to

GEORGE W. YORK & CO., Chicago, Ill.

Sweet Clover Seed!

Sweet Clover is rapidly becoming one of the most useful things that can be grown on the farm. Its value as a honey-plant is well known to bee-keepers, but its worth as a forage-plant and also as an enricher of the soil are not so widely known. However, Sweet Clover is coming to the front very fast these days. Some years ago it was considered as a weed by those who knew no better. The former attitude of the enlightened farmer today is changing to a great respect for and appreciation of Sweet Clover, both as a food for stock and as a valuable fertilizer for poor and worn out soils.

There are two kinds of Sweet Clover. One is the White variety which grows sometimes as tall as 6 to 7 feet. The other is the Yellow, which grows perhaps as high as 2 to 3 feet. The latter blooms from 3 to 4 weeks ahead of the White, which (the White) begins blooming in the latitude of Chicago about July 1st, and continues in profuse bloom until frost kills it off. It is one of the best nectar-yielders known, and the honey produced from it is second to none.

The seed can be sown any time from now until next April or May. From 18 to 20 pounds per acre of the unhulled seed is about the right quantity to sow. The seed is not yet as plentiful as it might be, for the reason that a good many who could gather it don't know its value, or that there is a demand for it sufficient to pay for the work of harvesting, threshing, etc. We, however, have been able to secure a quantity of the unhulled White Sweet Clover Seed, which unhulled is considered the best for sowing, by those who have had the longest experience with it. We can ship promptly at the following prices:

Postpaid, 1 pound for 30 cents, or 2 pounds for 50 cents. By express or freight, f. o. b. Chicago—5 pounds for $1.00; 10 pounds for $1.75; 25 pounds for $4.00; 50 pounds for $7.50; or 100 pounds for $12.00.

If wanted by freight, it will be necessary to add 50 cents more for cartage to the above prices on each order.

If seed is desired of the Yellow Sweet Clover, add 5 cents per pound to the above prices.

Address all orders to,

Arnd Honey & Bee-Supply Co.,

148 W. Superior St., CHICAGO, ILL.

A Bargain in Glass Jars!

Because we have more than we want we are going to offer some all-white, flint glass jars, with no lettering, and which are up-to-date for less than their real value.

The pound size can be used with either corks or paper discs. The latter are much cheaper, and really more desirable than corks. With paper discs (the most perfect stopper known), we will make the price only $3.40 per gross.

The small size holds 5 ounces of honey, and it is known to the trade as the "dime jar." The regular price of this size with corks is $3.25 per gross; but we will let them go at $2.25 per gross.

The foregoing are real bargains for any one who uses glass honey-jars.

Jars will be shipped direct from Pittsburg, Pa., but address all orders to,

SNYDER BEE & HONEY CO.

KINGSTON, N. Y.

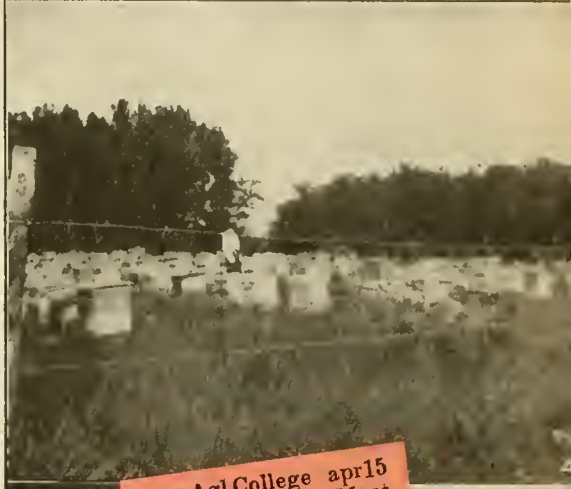
Please mention Am. Bee Journal when writing.

AMERICAN BEE JOURNAL

GOLDEN JUBILEE

No. 12

1



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December
1910

THE AMERICAN BEE JOURNAL

PUBLISHED MONTHLY BY
GEORGE W. YORK & COMPANY
146 W. Superior Street, Chicago, Ill.

IMPORTANT NOTICE

THE SUBSCRIPTION PRICE of this Journal is $1.00 a year, in the United States of America (except in Chicago, where it is $1.25), and Mexico; in Canada, $1.10; and in all other countries in the Postal Union, 25 cents a year extra for postage. Sample copy free.

THE WRAPPER-LABEL DATE indicates the end of the month to which your subscription is paid. For instance, "dec10" on your label shows that it is paid to the end of December, 1910.

SUBSCRIPTION RECEIPTS.—We do not send a receipt for money sent us to pay subscription, but change the date on your address-label, which shows that the money has been received and credited.

Advertising Rate, Per Agate Line, 15c.

14 lines make one inch.
Nothing less than 4 lines accepted.

DISCOUNTS:

3 times 14c a line   9 times 11c a line
6 " 12c "   12 " (1 yr.) 10c a line

Reading Notices, 25 cents, count line.

Goes to press the 6th of each month.

Nati[illegible] Bee-Keepers' Association.

(Organized in 1870.)

Objects.

1. To promote the interests of bee-keepers.
2. To protect and defend its members in their lawful rights as to keeping bees.
3. To enforce laws against the adulteration of honey.

Membership Dues.

One dollar a year.

Officers and Executive Committee.

President—George W. York, Chicago, Ill.
Vice-President—W. D. Wright, Altamont, N. Y.
Secretary—Louis H. Scholl, New Braunfels, Tex.
Treas. & Gen. Mgr.—N. E. France, Platteville, Wis.

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Are you a member? If not, why not send the annual dues of $1.00 *at once* to Treas. France, or to the office of the American Bee Journal, 146 W. Superior St., Chicago, Ill.? It will be forwarded promptly to the Treasurer, and a receipt mailed to you by him. It is the desire of the officers to increase the membership to 5000 by the end of 1910. Every [illegible]gressive bee-keeper should be a member [illegible]is, the greatest bee-keepers' organiza[illegible] in America.

SUPERIOR BEE-SUPPLIES

Specially made for Western bee-keepers by G. B. Lewis Co. Sold by

Colorado Honey-Producers' Associalion,
Denver, Colo.

Please mention Am. Bee Journal when writing.

MARSHFIELD GOODS

BEE KEEPERS :—
We manufacture Millions of **Sections** every year that are as good as the best. **The CHEAPEST** for the Quality ; **BEST** for the Price. If you buy them once, you will buy again.

We also manufacture **Hives, Brood-Frames, Section-Holders and Shipping-Cases.**
Our Catalog is free for the asking.

Marshfield Mfg. Co., Marshfield, Wis.

FOR SALE

Queens and Honey. Also three Remington Typewriters. These machines cost, new, $100 each; they look like new, and work like new. Will take $35 each, or will exchange for anything we can use.

QUIRIN-THE-QUEEN-BREEDER,
BELLEVUE, OHIO
Please mention Am. Bee Journal when writing

MAKE HENS LAY

By feeding raw bone. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier, profits larger.

MANN'S LATEST MODEL Bone Cutter

Cuts all bone with adhering meat and gristle. Never clogs. **10 Days' Free T[illegible],** No money in advance.

Send Today for Free Book.
F. W. Mann Co., Box 348, Milford, Mass.

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"If goods are wanted quick, send to Pouder"
(Established 1889)

BEE-SUPPLIES

Standard hives with latest improvement; Danzenbaker Hives, Sections, Comb Foundation, Extractors Smokers—in fact, everything used about the bees. My equipment, my stock of goods, the quality of my goods, and my shipping facilities, can not be excelled.

Paper Honey-Bottles

for Extracted Honey. Made of heavy paper and paraffin coated, with tight seal. Every honey-producer will be interested. A descriptive circular free.

Finest **White Clover Honey** on hand at all times.
I buy **Beeswax.** Catalog of supplies free.

Watter S. Pouder, Indianapolis, Ind. 859 Massachusetts Ave.

Ye who are in need of **HONEY** write to us for prices.
— Samples 10 cents —

We have the following Fine Honey to offer :

Extracted Honey { **ORANGE BLOSSOM**, **SWEET CLOVER**, **FLORIDA AMBER** } In Crates holding 2-60 pound Cans.

Comb Honey { **Strictly Fancy Comb Honey ; also Fine Chunk Comb Honey.** }

The FRED W. MUTH CO.
"THE BUSY BEE-MEN"
51 Walnut Street, CINCINNATI, OHIO

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M. H. HUNT & SON

The best time to buy your goods is during the fall and winter months. We are making **Liberal Discounts for Early Orders,** and would like to quote you **net prices** on your needs for next season.

—BEESWAX WANTED—

LANSING, - MICHIGAN.

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ROOT'S : GOODS

For Western Pennsylvania.

Liberal Early Order Discounts.
Gleanings and Choice Queens **Given Away.**
Write at once for Circular. Time is limited.

GEO. H. REA,
Successor to Rea Bee and Honey Co.,
REYNOLDSVILLE, PA.

BUY YOUR HONEY

From members of the Michigan Bee-Keepers' Association.
Send your address for free annual booklet, giving names of members, with information concerning the honey they have for sale.
Address,
E. B. TYRRELL, Sec.,
230 Woodland Ave. DETROIT, MICH.

Bee-Keepers

Here is a bargain in No. 2
4¼x4¼ **1-Piece 2-Beeway Sections**
$3.25 per 1000. Plain, 25c less.
Send your order to-day. Also write for Catalog. 1Atf
AUG. LOTZ & CO.,
BOYD, WIS.

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Bee-Supplies

Distributor of Lewis' Bee-Supplies at Factory Prices in Iowa. Also Red Clover and Leather-Colored Italian Queens; and the Folding Berry Boxes, and the old-style Boxes.
Beeswax wanted. Send for Catalog.

W. J. McCARTY, Emmettsburg, Iowa

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WANTED.—Thousands of both new and renewal subscriptions for the American Bee Journal during its Golden Jubilee Year. Why not each present regular subscriber send in one or two new subscriptions during the next 30 days?

Closing Out Offer

We Have Some Copies Left of the Book

"Bees and Honey"

By Thomas G. Newman

bound in cloth, that we offer cheap to close out. It contains 160 pages, and is bound in cloth. It used to be a one-dollar book, but we will mail them, so long as they last, at 50 cents each; or with the American Bee Journal one year—**both for only $1.20.** Surely this is a bargain. The book is well illustrated, and has some good information in it, especially for beginners. Address all orders to

George W. York & Co.,
146 W. Superior St., Chicago, Ill.

Sections at $3.50 a 1000

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one-piece 4¼x4¼x1⅞ two-beeway Basswood Sections. They are No. 2 quality, and listed at $5.00 per 1000. **Send in your orders now, before they are sold out.**

Our Shipping-Cases

are recommended by the largest honey-buyers in the country. Covers and Bottoms are one piece; everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass at $13 per 100; Crates of 50, $7.50; Crates of 25, $4.00.

Write for Catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee-Supply Co.

Nicollet Island MINNEAPOLIS, MINN.

A WONDERFUL FARM TOOL

CLARK'S DOUBLE ACTION CULTIVATOR AND HARROW. The most wonderful farm tool ever invented. Two harrows in one. Throws the dirt out, then in, leaving the land level and true. A labor saver, a time saver, a crop maker. Perfect centre draft. Jointed pole. Beware of imitations and infringements. Send today for FREE Booklet, "Intensive Cultivation."

CUTAWAY HARROW CO.
913 Main St., Higganum, Conn.

BARNES' Foot-Power Machinery

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey-racks, 500 brood-frames, 2,000 honey-boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.

Please mention Am. Bee Journal when writing

50,000 Copies "Honey as a Health-Food"
To Help Increase the Demand for Honey

We have had printed an edition of over 50,000 copies of the 16-page pamphlet on "Honey as a Health-Food." It is envelope size, and just the thing to create a local demand for honey.

The first part of it contains a short article on "Honey as Food," written by Dr. C. C. Miller. It tells where to keep honey, how to liquefy it, etc. The last is devoted to "Honey Cooking Recipes" and "Remedies Using Honey." It should be widely circulated by those selling honey. The more the people are educated on the value and uses of honey as a food, the more honey they will buy.

Prices, prepaid—Sample copy for a 2-cent stamp; 50 copies for 90 cents; 100 copies for $1.50; 250 copies for $3.00; 500 for $5.00; or 1000 for $9.00. Your business card printed free at the bottom of front page on all orders for 100 or more copies.

Address all orders to

GEORGE W. YORK & CO., Chicago, Ill.

Hardy "Blizzard Belt" Giant Strawberry Plants FREE

Everybody likes fine strawberries, and to prove that our new GIANT variety is the largest and strongest grower, as well as the heaviest fruiter, we offer to send you TWO PLANTS (worth 30 cents) absolutely FREE. We have picked 12 quarts of fine berries from a test bed grown from but two GIANT plants set the year before. You can do as well, and at the same time raise young plants for a new bed. If you care to send 10 cents for mailing expense, we will add 6 BABY EVERGREENS 2 years old, and send all to you at proper planting time in the spring. It will pay you to get acquainted with our "HARDY BLIZZARD BELT" Trees and Plants. Write to-day and we will reserve the plants for you and send you our catalog by next mail. Address

THE GARDNER NURSERY CO., Box 337, Osage, Iowa

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— TO YOU —

A Merry Christmas
A Happy New Year
AND No Increase in Prices
ON Lewis Beeware IN 1911

A SLIGHT ADVANCE ON BEE COMB FOUNDATION.
BUT WOODEN GOODS WILL REMAIN THE SAME.

Our New Annual 1911 Catalog will be issued some time in January. If you are in need of a copy before our regular issue reaches you, kindly write us and it will be mailed to you in advance.

G. B. Lewis Co., Watertown, Wis.

Marshfield Sections
Best Dovetail Hives
with Colorado Covers

Hoffman Frames, and everything pertaining to Bee-Keepers' Supplies sold at **Let-live Prices.**
Berry Boxes, Baskets, Crates, etc.
kept in stock. **Wholesale and Retail.**
Prices sent for asking.

W. D. Soper, 323 and 325 Park Ave. **Jackson, Mich.**

Please mention Am. Bee Journal when writing.

Get all you can for your raw Furs

Experienced trappers and fur collectors are never in doubt as to where to ship their furs. They all know that St. Louis, being the Greatest Fur Market in the world, is the place the best returns come from.

F. C. Taylor & Co., who own and control the Great Fur Exchange Building, have more money invested in building and equipment than all other St. Louis fur houses combined. They have better facilities, enjoy a greater demand and handle more furs than any other concern in America.

F. C. Taylor & Co. are therefore in position to send you **quicker** and **better net results** for furs than you can get anywhere else.

Trapper's Guide, Market Reports and other valuable information mailed FREE. Write at once for Latest Price List and shipping tags. You need no introduction—**Just ship**

F. C. TAYLOR & CO.
Greatest Fur House in the World
30 FUR EXCHANGE BLDG. ST. LOUIS, MO.

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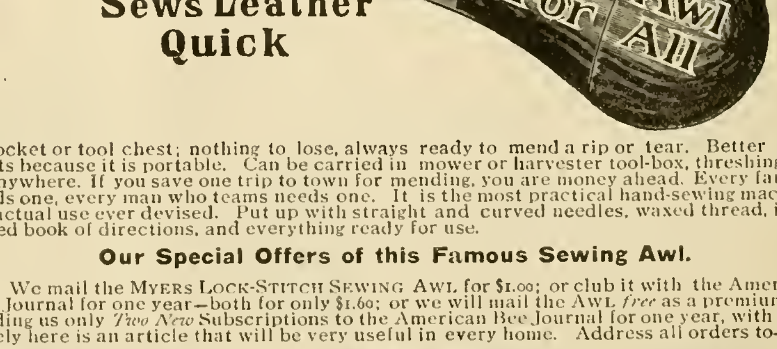
Myers Famous Lockstitch Sewing Awl

Is designed particularly for farmers' use, but it will be found a time-saver and money-saver in nearly every household. It is not a novelty, but a practical hand-sewing machine for repairing shoes, harness, belts, carpets, rugs, tents, awnings, canvas of all kinds, gloves, mittens, saddles, etc.; you can also tie comforts. The Awl proper is grooved to contain the thread or waxed end, and the point being diamond shape will go through the thickest of leather, green or dry, any thickness.

The "Myers Awl" can be used with either straight or curved needle, both of which come with the outfit, and veterinarians will find it indispensable for sewing up wire cuts in stock. The "Myers Lock-Stitch Sewing Awl" is a necessity for the people; can be carried in pocket or tool chest; nothing to lose, always ready to mend a rip or tear. Better than rivets because it is portable. Can be carried in mower or harvester tool-box, threshing kit, or anywhere. If you save one trip to town for mending, you are money ahead. Every farmer needs one, every man who teams needs one. It is the most practical hand-sewing machine for actual use ever devised. Put up with straight and curved needles, waxed thread, illustrated book of directions, and everything ready for use.



Our Special Offers of this Famous Sewing Awl.

We mail the Myers Lock-Stitch Sewing Awl for $1.00; or club it with the American Bee Journal for one year—both for only $1.60; or we will mail the Awl *free* as a premium for sending us only *Two New* Subscriptions to the American Bee Journal for one year, with $2.00. Surely here is an article that will be very useful in every home. Address all orders to—

George W. York & Co., 146 W. Superior St., Chicago, Ill.

AMERICAN BEE JOURNAL
L. L. LANGSTROTH
CHAS. DADANT

(Entered as second-class matter July 30, 1907, at the Post-Office at Chicago, Ill., under Act of March 3, 1879.)

Published Monthly at $1.00 a Year, by George W. York & Company, 146 West Superior Street,

GEORGE W. YORK, Editor.
DR. C. C. MILLER, Associate Editor.

CHICAGO, ILL., DECEMBER, 1910

Vol. L---No. 12

Editorial Notes and Comments

"Karo Corn Syrup" Advertising

The extensive advertising of this miserable concoction seemed to cease. Then the thought came, "They have found out that the public will not be deluded, and will waste no more money in advertising." The thought was a delusion. A big lot of money is again being put into advertisements that are so well worded that readers can hardly fail to be saying: "We must have some of that delicious article."

If there is profit in spending thousands of dollars in advertising Karo, why would there not be profit in spending the same amount to advertise honey? "Oh, Karo is a new thing, and must be brought to public notice in order to create a demand for it, while honey has been on the market thousands of years and everybody knows about it." That argument will hardly do. Thousands upon thousands have never had their first taste of honey, and the tables where honey is a daily article of food are few and far between.

If the same company that sells Karo could get a monopoly of honey, bee-keepers would see some advertising that would make them sit up and take notice. And the advertising would bring returns. The whole thing in a nutshell is that Karo is in the hands of a single concern, while honey is scattered among thousands of bee-keepers who are not all pulling together, and some of them pulling apart. It would be to the interest of bee-keepers, and perhaps still more to the interest of the consuming public, if bee-keepers would "get together" and inaugurate a campaign of advertising that would make the advertising of Karo look pale. Why can't they? Why don't they? Who can give the right answers to these short questions?

"The bee that gets the honey doesn't hang around the hive."

Hand's Plan to Prevent Swarming

At different times swarming has been prevented more or less satisfactorily by depriving a colony temporarily of its flying force. J. E. Hand describes in Gleanings a double bottom-board devised by him, through which the plan may be successfully carried out. A switch is so arranged that when the bees go into the front entrance they are all switched into one of the hives. That leaves the other without field-bees, and the colony, feeling its poverty, will at once destroy the preparations for swarming that had been begun. Then, later, when the colony has made a start on queen-cells, the switch is changed, and so on.

Bee-Keeping in Ontario

Under this title appears in the Canadian Bee Journal the report of Morley Pettit, Provincial Apiarist. Mr. Pettit sent out report blanks to 2175 bee-keepers, but only one in 5 responded.

The summer honey-plants reported are uniformly white and alsike clover. Basswood is reported from many counties, but is not of so much importance as formerly. Raspberry is reported from 7 counties. Alfalfa is being introduced into many counties, but its value as a honey-plant is problematical. Alsike is the most dependable source of light honey. Buckwheat is growing in popularity.

For the fall of 1909, 18,445 colonies are reported, with a winter loss of 9.3 percent, leaving the average spring count of each reporting bee-keeper 34.3 colonies. Mr. Pettit thinks it would be a fair estimate to count about 100,000 as the total number of colonies in the Province.

Bees Building Comb Upwards

Lately mention has been made in different bee-papers of bees building comb upwards, and pictures of such combs have been given. The fact is that bees will probably always build in that way when conditions favor it. At the beginning of the honey harvest it sometimes happens that place has not yet been given for storing surplus, but an empty super is over the brood-chamber. In that case, if the super is deep enough the bees will surely begin building upward from the brood-frames.

A peculiarity of this upward building is that the bees do not build straight, parallel combs, but circular. It is easy to see a good reason for this. Set a sheet of tin on one edge, and it will immediately fall over. But bend the sheet into a curved form, and stand it up on the curved edge, and it stands upright. Just so a straight comb built upright would fall over sidewise, while the circular comb stands erect.

Bulk-Comb Honey in the North

Texas is the special home of bulk-comb honey, but at least one man in the North has tried it successfully, Charles J. Greene, who reports in Gleanings. In some respects he departs from the Southern fashion. Instead of filling into the package as much liquid honey as he can, he uses just as little as he can, only putting in enough to bring the package up to weight if it lacks weight. He uses regular 5 and 10 pound butter-pails with straight sides, setting the combs on edge in the pail, and cutting the combs of such size that each comes clear to the top of the pail. He prefers straight sides to slanting sides, and would not have a vessel smaller at the top than the full size of the vessel.

Don't Clamp Bees in Clay Soil

A good many years ago there was a good deal said about wintering bees in clamps. Some succeeded, but there were bad failures, and wintering bees in clamps seemed to go out of style. Latterly, however, there seems a revival of the practice. It appears to be a matter of locality, or rather of soil, Root's "A B C and X Y Z" says it can be practiced only where the soil is sandy and porous, but not where there is much clay. It is easy to understand that a porous soil will let through plenty of air to meet the needs of the bees in winter, while in a clay soil there will be wet and mold in the hives. To be sure, ventilation may be provided in clay soils, but not to equal the slow and gentle entrance of air through the soil at all points.

President's Address at Albany

It seems the Address of the President delivered at the Albany National convention struck a popular chord. It was well received at the convention, and created considerable discussion. We have felt for some time that radical changes are necessary in order to put the National Bee-Keepers' Association in a position so that it may be of more practical value to its membership. We are hoping that our address at Albany may be but the beginning of better things. If we have been able to get it started, we shall feel well repaid for our efforts. However, we hope to be able to help along in any way where it is possible for us to help. A few comments that have come in on this matter may not be amiss. They are as follows:

BRO. YORK:—Of all the good things you have written, I think your Address at Albany is the best. It is timely and true. I would be glad to copy the whole of it in the December Review, but the index crowds things. I will make a digest of it. I shall do all I can to bring about these changes.
Yours truly, W. Z. HUTCHINSON.

The foregoing was written from the University Hospital at Ann Arbor, Mich., where Mr. Hutchinson has been compelled to be for some time. He returned to his home in Flint, but had a relapse and had to go back to the hospital. When the above was written (Nov. 16) he expected to be home again very soon. Surely all of Mr. Hutchinson's friends will join with us in the hope that his good health may soon be restored.

An active member of the Colorado Honey-Producers' Association writes thus:

MR. GEORGE W. YORK—
Dear Sir:—I want to congratulate you on your Address at the National convention. Whenever you want real help in the way of stock-taking, I believe you will find Western bee-men right there with the money. I have sold all my crop through the Colorado Association, and I know that co-operation pays. The fact is, outsiders do not realize what really is being accomplished. I have received \$2.85 to \$3.15, per case, for comb honey, and others in the same locality received \$2.50 to \$2.65. They *thought* they could get as much as the Association could, and they *think* so still. The Association charges 10 percent commission, but the proceeds, after bottling honey and selling supplies, have paid expenses, so it has cost us nothing to sell our honey except one year, and that year it cost us only 2½ percent. The surplus is rebated back to members after paying a dividend on the stock of 10 percent yearly.

Any time you want any more facts about the trade-building possibilities through co-operation, and the low cost of operation through this method, just write me. All the fruit associations of the West, or most of them, are managed in much the same way, and they are even more successful than ours.
COLORADO BEE-KEEPER.

The following comes from Mr. Wm. Whitney, one of the oldest members of the Chicago-Northwestern Bee-Keepers' Association:

FRIEND YORK:—I don't know which to congratulate most on account of the President's Address before the Albany meeting—you or the National Bee-Keepers' Association. It certainly is the best address of the kind I have ever read. It should cause the bee-keepers of the country to take notice, and do something. I have often wondered why the National was not a delegated body instead of such as it has been. More important busines should be considered than threshing "old straw" that local associations have pounded fine enough for bee-hive packing.

Of course, I'm out, but I'm just as interested as ever in the success of those in the business. Had I begun when young, I can scarcely guess how far I might have gone. I never failed to secure good prices for bees or honey. Honey at \$4.00 per case, and bees at \$10 per single colony, and \$8.00 per colony for a whole apiary, is not a bad showing. I sold many a colony for \$10.

I shall try to be at the Chicago-Northwestern convention Nov. 30 and Dec. 1.
Very truly yours,
Batavia, Ill., Nov. 15. WM. M. WHITNEY.

We are hoping that as the annual election is now over, the Board of Directors will take hold of matters energetically, and see what can be done. The Constitution of the Association needs to be revised, but this can not be done legally until the next election (November, 1911). All amendments should be agreed upon at the next annual convention, which must be held at least 45 days before the election month (November) in order that the Constitution may be amended in accordance with its present provisions. But there is much that the Board of Directors and officers can do, even under the present Constitution, between now and the next annual meeting. All the necessary amendments can be prepared so that they may be approved at the next annual meeting.

We do not wish to "run things" ourselves, but would be glad to do what little we can to make the National a success in every way.

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Bees Cleaning Up Combs

Two or three times of late we have entered a caution against letting bees clean up exposed wet extracting-combs in the vicinity of a common highway, or in a locality where neighboring dwellings are very close to each other. While we still think the caution is a wise one to put before beginners, we are convinced that under some conditions, an expert can have his combs cleaned out in this way to advantage.—*Gleanings in Bee Culture.*

Have you not noticed that when the combs are cleaned up outside that there is a considerable amount of damage done to the comb, and that a great waste of wax takes place? On the other hand, when the combs are cleaned up on the hive, the bees rather improve them, and there is no waste of wax.—*Canadian Bee Journal.*

All that is said by both authorities is true, or at least may be true. But the experienced bee-keeper who puts his combs out in the open to be cleaned up, is on his guard against any waste of wax, and very little of it occurs. He may give the bees so small an entrance to the combs that the bees will not tear them, or if he has a large amount of comb to be cleaned up he may go to the other extreme, and give such free access to the combs that the bees will not be crowded on any part of them; for it is the crowding upon the combs that makes the bees tear them.

Old and tough extracting combs are not very likely to be torn. The trouble comes with new, tender combs, and especially with partly-filled sections.

But why not, in any case, take the safer way, and let all combs be cleaned up on the hive? The difficulty in the case is that the bees may not take a notion to empty out the combs at all. They may *clean* wet extracting combs, but emptying them is another matter. For the combs may be licked up dry, and the licked-up honey put back in a few cells in the same comb. With unfinished sections there is nothing wet to clean up, and probably in the great majority of cases very slow work will be made of carrying the honey down into the brood-chamber. So in most cases the expert, whatever he does with his extracting combs, has his unfinished sections cleaned up away from the hive, even if there be a very little tearing of the comb, thinking it better to have them emptied with a little tearing than not to have them emptied at all.

Miscellaneous News-Items

Merry Christmas — Happy New Year!

Again we have come to the last number of the year, and not only Christmas will soon be here, but the opening of another new year as well. Our heartiest good wishes are extended to all our readers and their families, for a very Merry Christmas and the happiest New Year they have ever experienced. This is the season of exchanging not only gifts prompted by love and friendship, but for the indulgence of feelings of genuine good fellowship all around. On looking about us we can always find some one who is less favored than ourselves, so there is always cause for thanksgiving and happiness. Bee-keepers, like the honey they produce, should impart somewhat of the sweetness and joy to the lives of others with whom they come in contact from time to time. We hope that our thousands of readers may have a thoroughly enjoyable Holiday season.

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Illinois State Convention

The annual meeting of the Illinois Bee-Keepers' Association was held at Springfield Nov. 17 and 18. On account of the temporary illness of Pres. C. P. Dadant, he was unable to be present. But as this Association has "a bunch" of 5 vice-presidents, it was never entirely without a presiding officer. Messrs. W. B. Moore and J. W. Bowen, alternately, filled the chair very acceptably.

While the attendance was not as large as it should have been, still the interest was very good. Perhaps the most important action was that looking toward placing the apiary inspection work of the State in charge of the Department of Entomology, with Mr.

Forbes as its head. Mr. Forbes has been State Entomologist of Illinois for many years, and his Department is one of the best organized and most successful of any in the United States. Should he control the very important work of inspection in Illinois, bee-keepers can rest assured the work would be done well. Indiana, Ohio, Connecticut, New York, etc., are working under such a plan, and it is eminently successful and satisfactory to all concerned.

The officers elected for the ensuing year are as follows, practically all of them being re-elected to their several positions: President, C. P. Dadant, of Hamilton; W. B. Moore, 1st vice-president; J. W. Bowen, 2d vice-president; I. E. Piles, 3d vice-president; A. Coppin, 4th vice-president; Louis Werner, 5th vice-president; Secretary, Jas. A. Stone, Rt. 1, Springfield, Ill.; and Treasurer, Chas. Becker, of Pleasant Plains.

A complete stenographic report of the convention will be published in book form as usual and mailed to members. There are over 300 members now of the Illinois State Bee-Keepers' Association. There ought to be many thousands in its membership, as there are 35,000 bee-keepers in Illinois, according to the census of 1900. There are many readers of the American Bee Journal who are not members. Why not send $1.00 to Secretary Stone, and thus become not only a member of the Illinois Association, but of the National as well? The $1.00 pays the dues for one year in both organizations.

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The Index for 1910

In this number will be found the complete index for the present or 50th volume. It should prove of great value to those who have been careful enough to preserve the copies of the Bee Journal as they were received from month to month. The number of topics treated in various ways during the present year are surprisingly large. The volume contains just an even 400 pages this year—and all for only $1.00—4 pages for a cent! When one considers the technical character of the contents of the American Bee Journal, the limited field in which it circulates, and also the limited advertising patronage which it is able to secure, surely $1.00 is a very low subscription price.

We believe that our readers will find the index referred to, a great convenience in looking up subjects which they would like to read over again.

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"The Townsend Bee-Book"

This is a new publication of 87 pages, 6 by 9 inches in size. It is a practical treatment of the subject, "How to Make a Start in Bees," by Mr. E. D. Townsend, of Michigan, one of the most extensive and successful bee-keepers in the United States. In 11 chapters Mr. Townsend tells just how to manage bees for the largest success. A few of the chapters are devoted to such topics as "What Hive to Adopt;" "How to Buy Bees;" "How to Take Care of Swarms;" "Spring Management;" "Making Up Winter Losses;" etc. The book is published by the A. I. Root Co., and the postpaid price is 50 cents. If you wish a copy in connection with a year's subscription to the American Bee Journal, send $1.35 to this office, 146 W. Superior St., Chicago, Ill.

APIARY OF GREGORY BROS. & SON, OF OTTUMWA, IOWA.

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The Front-Page Pictures

The illustrations shown on the front page this month are described in the following:

Visiting Some Kansas Apiaries

It is a well known fact to experienced bee-keepers, no matter how long they have been engaged in apiculture, or how much they have read and done with the bees, they are always ready and willing to learn more and get ideas from their fellow bee-keepers. In fact, we never will learn all there is to be learned about the busy bees. The more we learn the less we seem to know.

Having been hard at work the past season with the bees, and desiring to take a trip and see some of the bee-keepers of this State, I accordingly "took a day off." One bright, sunny day in July, taking my kodak along (although being an amateur with the kodak), I started for Garden City at 5:40 a.m., arriving at my destination of 50 miles at 6:53 a.m., and found at the depot waiting for me a very fine looking gentleman, Mr. E. Davison, with his carriage ready to receive me. After talking for a moment or two, we started off to look over the city, going up one street and down another. I found Garden City to be one of the finest little cities in Western Kansas, with a population of about 2000 inhabitants. On entering the edge of the city we came to a large building or factory, and I was told by Mr. Davison that this was the sugar-beet factory, and one of the largest of its kind in that part of the State.

After seeing the city, we started out to the country. Driving about 3 miles, we halted and found an apiary in the midst of an alfalfa field, with thousands of acres of alfalfa in and about it. While Mr. Davison was looking over some of the colonies I pointed my kodak, and the result will be seen in Fig. 1. At the time of our visit, there were 143 colonies of bees in this apiary in 8 and 10 frame hives, and managed for comb honey. After spending some time in and about this apiary, we started back to the city to the home of Mr. Davison, where I found the family as happy as a lot of little kittens. We spent an hour or two talking about the bees.

After resting we finally started for another of Mr. Davison's apiaries. It was located about 2½ miles east of the city, and in the edge of an alfalfa field. There were 222 colonies of bees in this apiary (see Fig. 4). We spent some time among the bees, which were at work carrying home the nectar from the alfalfa. This apiary is managed mostly for extracted honey, the hives being the 8 and 10 frame size.

We went into the honey-house after looking over the apiary. Here Mr. D. does the extracting (see Fig. 3). The small building in the foreground is a store-room where he keeps extra supplies and tools.

Figure 6 is the summer home where Mr. Davison "keeps batch" when working with the bees.

On our return to the city we passed through a real "Lovers' Lane," in going to Mr. Davison's home, where we had dinner and talked bees during the afternoon.

I found Mr. Davison one of the best-informed bee-keepers in the State of Kansas, and I think he is the most extensive. He is also foul-brood inspector for this county.

I returned home thinking my time spent in visiting was well invested.

Dodge City, Kan. J. C. FRANK.

Ornamental Hives

Seeing pictures of so many different kinds of ornamental hives, I decided to make some that would be both ornamental and useful. After giving the subject some thought, I made the hive illustrated in Fig. 5. It is a standard 8-frame hive, the sides being framed together from 2x⅞ inch yellow pine. After framing, the openings 6x15 inches are closed with glass on the inside, and a tight fitting door on the outside.

This bottom-board is nailed to the hive, and the entrance is provided with a little door, which, when closed, will contract the entrance to 4x¼ inch; if open, the entrance is 6½x1 inch. At both ends of the hive are removable plugs which act as ventilators. These holes are ¾ inch in diameter, and are covered with wire-cloth on the inside.

In the illustration, the hive has one super, but there is a second super to it, which is fitted with 24 4x5 plain sections. The roof part from the super is ½ inch below the eaves. At this point a flat cover is made across the gabled roof, which is handy for storing records of colonies. A door opens into this from the rear gable.

Fig. 2 shows a standard 8-frame hive with two supers containing 24 sections each. The outside is covered with willow sticks, giving a log-cabin effect. The hive is painted green, and the ends of the small logs are red

Myerstown, Pa. WAYNE STEINER.

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Apiary of Gregory Bros. & Son

We are sending a picture of our apiary, taken the middle of June. It contains 53 colonies, part of them being pure Italians and the others hybrids. The season here is very bad. May was so cold that there was little fruit-bloom; then it became so dry that white clover did not last. The colonies were strong in bees, though there was but little honey to gather. We divided our colonies, and were successful. That is one way in which to start bees into new life.

One great mistake with many bee-keepers, we believe, is leaving the old combs in the hive that are black and tough. It decreases the size of the bees. Just try taking out a frame of old comb and put in one of new foundation, and see how they will draw it out and fill it with brood! And then, just notice the difference in the size of the bees, and their activity. We have replaced all old combs with new, and we could scarcely imagine the difference in building up, and the size of the bees. Just try it.

GREGORY BROS. & SON.

Ottumwa, Iowa, July 1.

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Bees Raising the Temperature

Some discussion has occurred in Gleanings as to whether it were better to put in a fertilizing hive a queen-cell or a caged virgin. M. T. Pritchard, an experienced queen-breeder, maintains that not only is it better to give a cell, but that quicker results can be obtained! The bees can not come in immediate contact with the caged queen or cell, and so there is not the same temperature. He gives the following interesting facts:

> In our experiment which we carried on in the bee-cellar under the machine-shop a few winters ago, we found that, when the bulb of a thermometer was placed against brood in a colony, it would show a temperature of about 97 degrees; but when placed in a colony which had no brood (even though this colony was the stronger of the two), the temperature would be below 90.
>
> Try this experiment: Take a colony strong enough to fill 2 hive-bodies. Have brood in the lower body, and honey only in the upper. Examine them during a cold spell, and you will find the bees in the lower body warm and active while those in the upper body will be numb with cold. At one time we tried hatching our virgins in an incubator which was run at about 97 degrees. The cells which were put in the incubator soon after they were sealed hatched promptly on time, and produced large active virgins. Why do the bees build the queen-cells so far out beyond the brood if it is not to enable them to get on all sides of the cell at once?

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Extra Charge for Bee-Demonstrations

Having in mind that people value more what costs at least a little, and that those who care nothing about bees only hinder those who do want to see and hear, L. G. Williams says in the Irish Bee Journal:

> "And here, let me add, that in my humble opinion it were always advisable to charge a little extra for admission to demonstrations, thus assuring the presence of those really interested in bees, and excluding the ladies who talk in loud whispers of fashions, etc., whilst the demonstrator is speaking, which necessitates his standing close to one side of the netting, and explaining to the interested ones some abstruse point; whereupon the offenders ask each other in injured tones: 'Why is he standing over there?' 'What is he talking about?' 'I can't hear a word!' My dear ladies, neither has any one else—who has had the pleasure of standing beside you—been able to hear a word, except regarding hats, and the merits of tight sleeves *versus* loose ones!"

Oh, but won't Mr. Williams have the sisters "after him" now? The idea of the ladies being so discourteous! But may be "locality" makes a difference in this as well as in some other things. Or is it just plain Irish to do that way?

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How About New Subscribers?

We believe that many of our subscribers and long-time readers could easily secure many new subscriptions for the old American Bee Journal among their friends and neighbors who are bee-keepers. We would be pleased to send as many sample copies as can be wisely used in such efforts. No others know so well the value of the contents of this Journal as those who read it regularly. This fact makes it easier for them to secure new subscriptions than could any other class of people.

We wish that every bee-keeper, who would like to make more money out of his bees, and at the same time be uplifted morally and intellectually, would subscribe for the American Bee Journal. We are trying to do our part at this end of the line, and must depend upon our readers for a wider circulation of this particular bee-paper. Scattered throughout the pages of each number there are surely liberal offers on either premium or clubbing, to those who will spend a little time in securing new subscriptions.

If each one of our present subscribers would send in only *one new name* for 1911, the list would be doubled at once. Some have done exceptionally well in securing new subscriptions. We are hoping that a larger number may follow their good example. We are here to serve the best interests of bee-keepers, and the only way we can do it is to send them the American Bee Journal. How many among our present list of subscribers will send in at least *one* new subscription before Jan. 1, 1911?

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The Michigan State Convention

The annual meeting of the Michigan State Bee-Keepers' Association was held at Grand Rapids Nov. 9 and 10, 1910. There were nearly 100 persons present, and the interest was maintained from the opening session until the very close. Mr. L. A. Aspinwall was the alert presiding officer, and kept things moving right along. E. B. Tyrrell, the efficient secretary, was at his post, and did his part to make the convention a most interesting and profitable one. There was no set program, but important topics were brought up one after another in quick succession, so there was not a dull moment during the whole convention.

Dr. E. F. Phillips, In Charge of Apiculture at Washington, D. C., was present, and contributed his share to the meeting. A plan of getting in touch with all the bee-keepers in Michigan was inaugurated, which, if faithfully followed up, we believe will result in putting Michigan in the very front rank of State organizations of bee-keepers. With Mr. Tyrrell as manager of the new project, it is bound to be successful. There is a way in which all State societies of bee-keepers can co-operate with the work being done by the government in the interest of bee-keeping, that is bound to create a greater advance in the pursuit, and also a better understanding and a more successful co-operation among bee-keepers themselves. If the various State organizations will do their part, we are satisfied the result of this mutual work will do something heretofore considered an impossibility. Watch Michigan, and see how she does it.

The several generous premiums offered for exhibits in honey and beeswax brought out quite a number of exceptionally fine lots. For a small exhibition it certainly was a good one. Such clean, beautiful beeswax it has seldom been our privilege to behold. The honey—both comb and extracted—was tempting enough to make your mouth water several times. It was our pleasure to act as one of the three judges. We certainly had a difficult time to decide upon the winners of the premiums offered. Mr. E. D. Townsend (Michigan's most extensive bee-keeper) and Mrs. W. S. Frey were the other two on the judging committee.

The officers elected were as follows: President, E. D. Townsend, of Remus; Vice-President, L. A. Aspinwall, of Jackson; and Sec.-Treas., E. B. Tyrrell, of Detroit. Mr. Townsend and Mr. Aspinwall just exchanged places, as the latter was president during the past year, and the former was vice-president. Mr. Tyrrell was re-elected, and enough work put in his hands to keep him busy for some time.

Saginaw was selected as the place of the next meeting, the date to be decided by the Executive Committee.

The Michigan Association has a membership of a few over 200. The Government has the names and addresses of nearly 4000 bee-keepers in the Lower Peninsula alone. No doubt there are many thousands more scattered throughout the State. It does seem that with a little more effort the membership of this Association should be increased to several thousand. When once the various States are in full swing, and affiliated with the National, and then the National re-organized so as to make it a real head and leader in the cause of bee-keeping in this country, we believe the time will be at hand when there will be "something doing" in bee-keeping that will be a revelation to the great majority of those who have seen this important industry drift along as it has done for many years. We are expecting great things from the Michigan Association, and believe we will not be disappointed. Of course, it will take a little time to "get a-going," but when once under "a full head of steam" things will begin to move apiculturally in that great State as they have never done before, we believe.

Mr. Aspinwall brought with him one of his non-swarming comb-honey hives, which he has been working on for 25 or 30 years, and now has finally completed. He expects to put it on the market another season. It is certainly a most ingenious invention, and if it will do all its inventor claims for it, the production of comb honey will be largely increased during the years that are just ahead. Mr. Aspinwall has kept bees for about a half century, and while having invented and perfected the most successful potato planter and digger, he has still had time to help in the advancement of bee-keeping, by producing a hive which he is satisfied will do all he claims for it. While now in his 68th year, Mr. Aspinwall is still vigorous, and a most interesting gentleman. Michigan bee-keepers may well be proud of him in many ways. It has been our privilege to meet bee-keepers in almost every part of our great country, and we have been delighted to find so many men and women in its ranks, of such honorable and inspiring character. We may all rejoice that we are interested in a pursuit that contains so many fine personages.

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New York Bee-Keepers' Institutes

At Geneva, Ontario County, in Jacob's Hall, Monday and Tuesday, Dec. 12-13, the following will be the program, conducted by Charles Stewart, with C. B. Howard, of Romulus, as local correspondent:

MONDAY, 10 A. M.

What Should be Done to Control Bee-Disease, in Addition to Inspection Work?—E. F. Phillips, of Washington, D. C.

My Method of Conducting Out-Apiaries—C. B. Howard, of Romulus.

Question-Box.

1:30 P. M.

The Italian Bee W. D. Wright, of Altamont.

Requisites of Extracted Honey-Production—Rev. J. T Green, of Interlaken.

Question-Box.

Tuesday, 10 A. M.

Queen-Breeding Simplified—E. F. Phillips.

Wintering Bees in Cellars—N. D. West, of Middleburgh.

Wintering Bees Out-of-doors—Chas. Stewart, of Johnstown.

Question-Box.

1:30 P. M.

Marketing Honey—F. Greiner, of Naples.

Is it Profitable to Combine Some Other Occupation with Bee-Keeping?—C. J. Baldridge, of Kendaia.

Question Box.

At Rochester, Monroe County, Wednesday, Dec. 14, in Assembly Hall, Chamber of Commerce, conducted by W. D. Wright, with Louis Wahl, of Chili, as local correspondent:

Wednesday, 10 A. M.

The Honey-Bee as a Fertilizing Agent.—E. F. Phillips

Retailing Honey—Louis F. Wahl, of Chili.

Which is Most Profitable, Comb or Extracted Honey?—N. D West.

Question-Box.

1:30 P M.

Essentials of Success in Bee-Culture—O. L. Hershiser, of Kenmore.

Wintering Bees Out-of-doors—Chas. Stewart.

Bee-Keeping in the Hawaiian Islands E. F Phillips.

Question-Box.

At Syracuse, Onondaga County, Thursday, Dec. 15, in the City Hall, conducted by N. D. West, with J. H. Cunningham, of Syracuse University, as local correspondent:

Thursday, 10 A. M.

Best Package for Retailing Extracted Honey—Irving Kinyon, of Camillus.

Conducting Out-Apiaries—S. D. House, of Camillus.

The Honey-Bee as a Fertilizing Agent—E. F. Phillips.

Question-Box.

1:30 P. M.

Production of Extracted Honey—F. W. Lesser, of Syracuse.

A Model Bee-Cellar—M. Stevens, of Pennellville.

Alfalfa as a Honey-Producer in New York State—Oscar L. Dines, of Syracuse.

Exhibiting Honey at Fairs—Dr. C. G. Schamu, of Liverpool.

Question-Box.

At Ogdensburg, St. Lawrence County, Friday, Dec. 16, in the rooms of the Business Men's Association, conducted by M. Stevens, with W. T. Davis, of Ogdensburg, as local correspondent:

Friday 10 A. M.

What the United States Department of Agriculture is Doing for Apiculture—E. F. Phillips.

How to Produce Gilt-Edged Comb Honey—E. Elethorp, of Hammond.

Which is Most Profitable, Comb or Extracted Honey?—N. D. West.

Some of My Short Cuts—D. R. Hardy, of Watertown.

Question-Box.

1:30 P. M.

How Can We Increase the Sale of Honey?—W. T. Davis, of Ogdensburg.

The Drone as a Factor in Improving a Strain of Bees—G. B. Howe, of Black River.

What I Have Learned by Italianizing—A. A. French, of Black River.

The Italian Bee—W. D. Wright.

The Best Hive for Honey-Production—F. H. Loucks, of Lowville.

Question-Box.

At Amsterdam, Montgomery County, Saturday, Dec. 17, in the Common Council Chamber, City Hall, conducted by Chas. Stewart, with T. I. Dugdale, of West Galway, as local correspondent:

Saturday, 10 A. M.

A Model Bee-Cellar—M. Stevens.

The Benefits of Bee-Inspection—G. W. Haines, of Mayfield.

Wintering Bees Out-of-doors—Chas. Stewart

Question-Box.

1:30 P. M.

What the United States Department of Agriculture is Doing for Apiculture—E. F. Phillips.

Travels Among Bee-Keepers—T. I. Dugdale, of West Galway.

Marketing Extracted Honey—John Cotton, M. D., of Burnt Hills, and Rev. P. A. Wessels, of Amsterdam.

Question-Box.

At Utica, Oneida County, Saturday, Dec. 17, in the Common Council Chamber, City Hall, conducted by W. D. Wright, with H. E. Bliss, of West Winfield, as local correspondent:

Saturday, 10 A. M.

Queen-Breeding Simplified—E. F. Phillips.

Wintering Bees in Cellars—N. D. West.

The Italian Bee—W. D. Wright.

Question-Box.

1:30 P. M.

Bee-Keeping as an Avocation for Women—Miss Hattie Hoffman, of Canajoharie.

Re-queening Colonies—N. D. West.

Organization—W. D. Wright.

Question-Box.

Oklahoma State Convention

The annual meeting of the Oklahoma Bee-Keepers' Association will be held in connection with the "Farmers' Short Course," at the A. & M. College, in Stillwater, Thursday, Jan. 19, 1911. All members of the Association should make a special effort to attend, for besides the regular program, which will be given in the College Chapel, a business meeting will be held, some new officers elected, and a bee-disease law drafted. Every one in the State interested in bee-keeping is invited to attend.

F. W. Van De Mark, *Sec.*
Stillwater, Okla.

Fillmore Co., Minn., Convention

The Fillmore Co., Minn., Bee-Keepers' Association will meet at Preston, Minn., Dec. 15 and 16, 1910. All interested are cordially invited.

Harmony, Minn. P. B. Ramer, *Sec.*

"Keep a *watch* on your words, my children,
For words are wonderful things.
They are sweet, like the bees' fresh honey,
Like the bees, they have terrible stings."

Our Bee-Keeping Sisters

Conducted by Emma M. Wilson, Marengo, Ill.

Why Women Should "Know Bees"

It is very pleasant, indeed, when all the members of a family are interested in the same pursuit. There is a chumminess about it that can not be obtained otherwise. Take the matter of flowers, for example: If a woman is very fond of them, and her husband regards them as he would so many weeds, then at least a part of her enjoyment in them is taken away. This same truth works out to a greater extent in a business way. Take a bee-keeper: If his entire family is interested in bees, his pleasure is greatly enhanced, as well as his profit, in the business. No doubt there are many more wives, daughters, and sisters of bee-keepers that are efficient helpers than we know anything about, for they are very often the silent partners, although their help may be the means of spelling success instead of failure.

In bee-keeping, as perhaps in no other business, it is difficult to obtain expert help at the critical time it is needed. So many people are afraid of bees, that, indeed, it is almost impossible to obtain any sort of help. In case of sickness of the bee-keeper, what a comfort it is if some member of the family is able to run the apiary until he is fully recovered; in fact, that recovery may be materially hastened if the mind is fully at rest in regard to the bees. Indeed, it might, in some cases, be the deciding factor between life and death, for worry is not an aid to recovery.

Death has left more than one poor woman with an apiary, like a white elephant, on her hands. Perhaps she has been in the habit of doing certain portions of the work successfully, but as to running an apiary independently she is utterly helpless, consequently she must dispose of her bees at whatever she can get for them, and that generally means at great sacrifice. On the other hand, if she is able to care for the bees, she is independent, and can make her own terms. Even if she does not intend to keep the bees permanently, she can hold them until she can dispose of them at a profit.

Wouldn't it be a good plan for every bee-keeper to have at least one member of his family perfectly able to care for the apiary in case he should be called upon to do so?

Another important item is well worth considering: Did you ever notice, when two bee-keepers meet, how promptly the stream of bee-talk begins to flow? One of the chief delights of a bee-keeper's life seems to be to talk with some other bee-keeper. What a world of comfort it would be to him if a wife or a daughter were familiar with the ins and outs of bee-keeping, so that he could talk things over whenever the desire should move him.

On more than one account it seems well worth while that a woman should not only be able to help in some particular department of bee-keeping, but that she should have a good general knowledge of the whole business.

Getting Apiarian Employment—Changing Locations

From a far-off land comes a letter from a sister who is an experienced bee-keeper, and who desires advice about becoming a bee-keeper in this country. Not having the necessary capital to start an apiary of her own she is anxious to work in conjunction with some one else.

There are doubtless those who would be glad of expert help, as there always are, but the difficulty is, in this broad land, to know who and where they are. Sometimes they advertise in the bee-papers, but oftener they find some one near at hand. A short advertisement in a bee-paper, advertising the fact that a capable bee-keeper desires a situation, would be likely to meet a response, if not several responses.

It may not be out of place to say that one needs to be somewhat careful as to going any great distance to enter a new field. Undoubtedly some regions are better than others for bee-keeping, but the differences are not so great, sometimes, as one might imagine. Besides, other things than the matter of bee-pasturage are to be considered. Those "other things" often make so much difference that they overbalance all the advantages of the better pasturage.

A very capable bee-keeper in one of the Northern States thought he might do better in California. After a year or more in that bee-paradise, he is back again in his old locality. The same is true of a prominent Canadian bee-keeper; while the probability is that many a one who has gone a long way to a supposedly better place, heartily wishes no change had ever been made. This is not saying, by any means, that no one should ever seek a new location; only that due caution should be observed as to making any change.

Honey to Become a Staple

Right now, when the price of honey remains discouragingly low as compared with other products, it is cheering to find something with such an optimistic ring to it as the following in the Bee-Keepers' Review, from Miss Mathilde Candler:

> Luxuries we can do without; but not so with necessities; and most articles in common use, that we deem *necessities* now, were considered luxuries *once*. By common use they became necessities. Bee-keeping has now reached a point where co-operative action and a united aim and interest are all that is necessary to make honey a staple product and a necessity on every table. More honey is used now than ever before. More people eat honey, and people eat more honey, and the increased consumption is due largely to the better quality.

"J. L." Only "Mrs. Byer's Husband!"

It begins to leak out why J. L. Byer is the successful bee-keeper he is. It's the kind of wife he has. The season of 1909 Mrs. Byer herself uncapped 30,000 pounds of honey!

A California Bee-Sister

Gleanings has no department for the bee-keeping sisters, but it has a department conducted—and well conducted—by a bee-keeping sister. Mrs. H. G. Acklin's name stands at the head of the department, "Bee-Keeping in Southern California." She says lady bee-keepers are more scarce in California than in the North.

No Doubt She "Settled" Them

On the program of the Ontario Bee-Keepers' Association, one number reads, "Can a Woman Run an Apiary?" Is it possible that such wide-awake men as those Canuck bee-keepers can have any question on that subject? It is to be hoped that Miss Ethel Robson, who had the topic in charge, settled their minds forever upon the question.

"Milk and Honey"—and Bread

> An old-fashioned dish which is worth trying is "milk and honey." Serve the honey in tiny saucers and pour creamy milk or cream over it. The cream or milk tones down the cloying sweetness of the honey and makes it just right.—*The Farmers' Voice.*

Here's the way we do it at our house: Lay a piece of bread on a plate; then pour cream over it until the cream runs off on the plate; and let the bread soak up the extra cream.—[But where does the *honey* come in—or come on—in the Marengo "way?"—G. W. Y.]

Southern Beedom

Conducted by Louis H. Scholl, New Braunfels, Tex.

How We Ship Bulk-Comb Honey

Last month I promised the readers that I would give in detail in this issue my method of shipping honey—"shipper's order, sight draft attached to bill of lading"—and the advantages of such a method. This is a way of selling honey that I have employed in a most satisfactory manner for many years. It is the only safe and sure way of receiving pay for the goods before you lose the ownership of those goods. It is a fair and square way of putting the honey right in the depot where the buyer can get it if he is willing to pay for it. This is just like laying goods on the counter in a store and the customer pays for what is before him. The customer knows the goods are there for him, where he can get them; and the shipper knows that his goods are not going into the hands of dishonest parties until they are paid for.

It seems, however, that this method does not work satisfactorily with all persons, for I have been asked on several occasions whether it is very satisfactory with me or not. One of our largest dealers at one time related the fact that such shipments were generally refused, and caused all manner of trouble and delay before the matter could be adjusted. Right in line with this, one of the correspondents of this Journal writes me the following:

> "Say, Mr. Scholl, you've got me into trouble. In some of your writings you say something to this effect: 'In shipping honey it best to ship with sight draft attached, to avoid dishonest parties beating you out of your pay, etc.' Well, a short time after reading this I shipped some honey in this way, and the party refused to take it from the depot, saying: 'If you can't have confidence in a fellow to ship him honey without having it tied up by the railroad company so one can't get it out of the depot without paying for it first, why you can keep your old honey.'
>
> I give the above to show how little business sense some people have. It has been truly said, 'It Is hard to please all.'"

The reason I give the above is to show that *sometimes*, and with *some* people, this method of shipping honey may not be a *success*, but in the last sentence above, relative to the lack of "business sense" of some people, will be found an explanation for an *occasional* refusal of a sight-draft-attached-to-bill-of-lading shipment. I say "occasional," because such refusals have never occurred to me. Only upon two occasions did a buyer write us, after receiving my quotations, that he did not like to do business in that way, preferring to remit for the honey immediately upon its arrival. I promptly wrote in each case that the above way was one of the strict rules followed in my extensive business, and to which I adhered, but if they did not prefer this method of doing business there was another—one that was followed by nearly all business men—that of sending "cash with the order." One of them sent a check with an order; the other was never heard from again. And all the while I have sent out hundreds of shipments for more than 10 years, insuring my pay for honey shipped, and proving most satisfactory in every way.

It is impossible for me to understand how any bee-keeper who has much honey to ship, as I have, selling to several hundred different customers, in as many different localities each year, and reaching people of all classes, from the rich to the poor, can safely ship his honey in any other way. The "cash in advance" idea is out of the question when applied to honey orders, and, besides, this has not appealed to me as a fair way on the part of the buyer, for several reasons. One of the main reasons would be that there are all kinds of bee-keepers as well as all kinds of honey-buyers; besides, it often happens that the bee-keeper can not fill the orders, which would require returning the money.

I believe the secret of my success with this method of shipping honey is this: All of my quotations are made on price-lists that have the following terms attached, which show that this is the way I do business, and if *anybody* orders from me, these apply:

> "TERMS:—*Sight draft attached to bill of lading. Subject to examination.*"

The "examination" part hardly ever takes place.

American Bee Journal's Fine "Dresses"

That front cover of the American Bee Journal for October, 1910, is simply beautiful, and clearly shows what wonderful strides the art of man is making along the line of photography. I tell you, it's a dandy, all the covers are to be admired, and the inside is good, too.

Like some of your other readers, Mr.

Editor, I like to see the pictures of apiaries, with a short description of them, in the American Bee Journal, so don't hesitate to print them. You will find more of your readers pleased than displeased with them.

How Far Bees Fly, Again.

I don't know how far bees will fly for stores in other States, but in this part of Texas they fly from choice 3½ to 4 miles. These are proven facts, for I have seen it proven a number of times right here in this locality, in the last 20 years.

"Estimating" a Location.

A bee-keeper in this part of the State wrote me some time ago to know how many colonies of bees 640 acres of irrigated alfalfa would support, backed up by mesquite and plenty of catclaw. That may sound like a simple and easy question to answer to the average novice, but I'll tell you it's not so easy, after all.

First, we would want to know how much he called "plenty of mesquite and catclaw?"

Second, we should want to know if alfalfa yielded nectar in the location of the proposed apiary?

It is a fact that alfalfa does not yield nectar plentifully in many parts of Texas. I wonder if some of our Colorado or New Mexico bee-keepers could not help out on this.

Rescue, Tex. L. B. Smith.

Prices of Texas Bulk-Comb Honey

On page 360, Otto Sueltenfuss tries to imply that the writer's article relative to the price of bulk-comb honey is "a misstatement of facts." I regret such statements about myself, as made by him, much more than other misstatements (?) that I might have made regarding the price of bulk-comb honey, for which I have ample proof to show that I was perfectly "fair and square" when I explained and described, in my October article, the various kinds of packages and the different prices received for the honey. Had he investigated he would have found the facts, as I knew them, that much the largest portion of the Texas bulk-comb honey is sold by the bee-keepers at 10 to 11 cents for the large cans, and considerably more for the smaller sizes. Just because he and some others sold at a lower figure. does not set the price obtained for most of the honey.

Contributed Articles

American Foul Brood—Will the Bees Clean It Out?

BY C. P. DADANT.

In Gleanings for October appeared an article from an experienced apiarist, Mr. Henry Stewart, in which the writer asserts that the bees can and do clean out the diseased and ropy matter from the cells. He says:

> "The worst foul-broody combs that can be found should be placed over a queen-excluder above a foul-broody colony of good strength. If the results are watched, the foul-broody matter will be found disappearing, and patches of nicely polished cells taking its place."

Mr. Stewart's method for getting rid of foul brood is therefore to give foul-broody combs to colonies that are strong in bees, or to add bees to the foul-broody colonies to such an extent that they may clean up the dead foul brood.

My object in writing is to warn bee-keepers against such a procedure, if they expect to succeed in getting rid of foul brood.

That the bees do get rid of some foul brood by cleaning it out of the combs is not to be doubted, but to expect it to be entirely *eradicated* by this means is a delusion, unless the disease which we are fighting is not the true virulent, ropy, viscous American foul brood.

In order to determine the greater or lesser possibility of a cleaning up by the bees, I have spent a half day investigating the reports of authorities on this subject. I am fully aware of the importance of this question; some years ago I gathered together the different pamphlets that were published of late on the subject, and had them bound in book form for ready reference. This book I consider one of the most useful on my library shelves.

Of the different publications, the most important is that of the National meeting of Inspectors of foul brood in San Antonio, Tex., on Nov. 12, 1906. I was present and heard the statements made by Dr. G. F. White, bacteriologist, which proved conclusively to my own satisfaction that Cheshire had two different diseases in his hands, unknown to him, when he made his studies and tests, afterwards published in his book, "Bees and Bee-Keeping." It is possible that such is now the case with Mr. Stewart.

Here are the opinions of the experts as gathered from the different works concerning the removal of the decayed matter by the bees in the case of American foul brood, or concerning its virulence:

Dr. E. F. Phillips—"The adult bees of a diseased colony are usually rather inactive and do little towards cleaning out infected material." Farther on—"Seemingly the ropiness makes it impossible for the bees to remove the infected material, and when the decayed mass dries down, it forms a scale which adheres so tightly to the lower sides of the cell that it can not be removed without tearing the wax walls."

Dr. G. F. White—"It is not uncommon in examining the brood to find only a portion of a larva in a cell, the bees having removed part of it."

N. E. France—(Eighth Annual Report of Inspector of Apiaries in Wisconsin) — "I have carefully tested the remedy of treating the infected combs for future use with formaldehyde gas to destroy the germs of disease, and thus save the combs for future use. A large and perfectly air-tight box was made, some 60 or more brood-combs were placed in the box far enough apart to admit of free action of the gas to each comb. The combs after treatment were tested. The open cells in the brood-combs that contained only the dry scales of disease were cleaned out by the bees and healthy brood appeared. But wherever the comb contained honey or pollen in the same infected cell, or where the cell was capped over, as all brood is before ready to hatch, in all such cases the gases failed to destroy the life in the germs of the disease. Such combs, after given to the bees, were again badly infected."

Wm. McEvoy (the most successful inspector of foul brood, whose treatment is accepted everywhere as positive)—"All the old foul-brood combs must be burned or melted into wax." He evidently does not believe that giving these combs to strong colonies would cleanse them.

M. M. Baldridge (one of the oldest bee-keepers, whose articles may be found in the first years of the American Bee Journal, and who was already a practical man half a century ago)—"The contents of the diseased colony may be disposed of by burning the same; such combs as contain honey and are free of diseased brood may be extracted and saved for table use, and the empty combs melted into wax. Those that contain brood may as well be burned up at once."

Schirach (in 1771, already knew of foul brood, and was the first to give the positive cure)—"Remove all combs of diseased colonies and keep the bees fasting for two days."

Della Rocca (living in the Island of Syra, in the Mediterranean Sea, in 1780, was acquainted with foul brood, which he described positively and accurately in his "Traite sur less abeilles," published in 1790; Vol. III, page 262-3)—"In the beginning, not having perceived that this disease was contagious, we had the imprudence of filling the old hives from which the bees had died with new swarms; these all caught the disease and perished." Farther he says: "We tried to remove the infected combs *and place into the diseased colonies some fresh swarms to help the others*, but this method failed—the old and the new died together."

F. R. Cheshire—"Should any attempt be made at removing a dead larva which has assumed the coffee-colored stage, the remains, tenaciously adhering to the cell-wall, will stretch out into long and thin strings, somewhat like half-dried glue."

J. J. McKenzie, B. A. (bacteriologist of the Province of Ontario)—"The hive and frames in which a foul-broody colony has lived must be sterilized."

Chas. Stewart (inspector in New York State) — "The shaking method has never failed us if done in a thorough manner. Colonies that are found to be diseased late in the season may be cured by taking away *all their combs* after brood-rearing has ceased, and giving them clean combs from a healthy colony."

Fred A. Parker (inspector of Santa Barbara Co., Calif.)—"Nothing short of removing all the combs will make the cure permanent." (This same man relates *one case* where the disease disappeared of its own accord in an apiary of 30 colonies. On the other hand, he reports one instance where an apiary was entirely destroyed by the disease in one season. His conclusions are that the disease, although erratic in its nature, is dangerous, and that a relentless war should be waged against it until extermination.)

J. M. Rankin (California)—"I have seen an apiary showing only slight infection in February become almost a total wreck by August."

Dr. Phillips visited an apiary of 151 colonies in Ventura Co., Calif., with A. G. Edmonson, inspector. Two years previously that apiary was healthy, but, at the time of their visit only 15 colonies were healthy, and the other 136 were either dead or nearly so.

Louis H. Scholl, of Texas, burns up all diseased colonies for fear that by the shaking treatment some honey may be dropped to the ground that will transmit the disease.

Bertrand, Switzerland (La loque et son traitement)—"A colony suffering from foul brood is less active than its healthy neighbors, the flying bees have less activity and appear discouraged ......The bees remove chilled dead brood from the cells, but do not have much to do with the cells containing foul brood, *unless the apiarist has used an antiseptic.*" (This writer recommends the use of antiseptics and destroys but very few combs, except in cases where the colony is badly infected. Most of his experience appears to be with fresh cases, for he is a very careful bee-keeper.)

Dzierzon ("Rational Bee-Keeping") —"The bees take the trouble *partially* to remove to the outside the blackish-brown crust forming finally from the rotten matter." A little farther he says: "When they are in some strength they can at most get rid of it by entirely biting down the tainted cells and making fresh ones."

Of Dzierzon's losses by foul brood, Langstroth says in his first edition of the "Hive and Honey-Bee:" "In the year 1848 a fatal pestilence, known by the name of foul brood, prevailed among his bees and destroyed nearly all his colonies before it could be subdued, only about 10 having escaped the malady. He estimates his entire loss that year at 500 colonies."

Jas. A. Green (quoted in "Langstroth Revised," who gives a most accurate description of foul brood)—"Usually the bees make no attempt to clean out the infected cells, and they will sometimes fill them with honey, covering up this dried foul brood matter at the bottom."

Many authors mention two kinds of foul brood, the virulent and the mild form. It seems to be the present consensus of opinion that the mild form is not foul brood at all, but what is now called "pickled brood," and it takes an expert to recognize the difference. The self-cured instance mentioned by Fred A. Parker, of California, was undoubtedly a mild case, and so must have been the combs so easily cleaned in Mr. Stewart's case.

I have myself met at different times those who thought they had had cases of foul brood, that disappeared of its own accord. I recollect an old gentleman, Mr. St. Pee, who was treasurer of the French Societe d'Apiculture, in 1900, at the time of my visit in Paris. He had charge of the experimental apiary in the Luxembourg gardens, and showed me the bees. He said they had had foul brood in that apiary, but it had worked itself out without any remedies. He was therefore quite optimistic regarding this disease.

To sum up the above numerous testimonies: Whenever we come across cases of easily cured foul brood, we may safely decide that it was not the ropy, malignant American foul brood. This is rarely cleaned out of the combs by the bees.

The different advices, as well as my personal observation, indicate that it is not necessary to burn up anything, although in very advanced cases the disgusted apiarist will prefer to burn up the worst contaminated combs, for it is not a pleasant task to heat decayed animal matter over a fire, even to save a few pounds of beeswax.

From two authorities, France and Bertrand, we may conclude that combs containing neither honey nor pollen may be disinfected so that the bees of a healthy colony will cleanse them of dead matter after the latter has been thoroughly dried. As a rule it is best to melt up the combs of diseased colonies for beeswax, taking care to keep the wax hot two or three hours. The hives need only to be disinfected by a flame to be entirely safe for use again.

Hamilton, Ill.

Wintering Bees in a House-Cellar—Non-Swarming

BY G. A. BARBISCH.

During the past 8 years I have wintered all my colonies in the house-cellar, and with the exception of the first 2 years, when I lost 2 colonies, I have not lost a single colony. With these 2 colonies it was my own mistake. They became somewhat restless, and in order to make them quiet I shut them in with wire-cloth, which simply will not do, for as soon as the bees know they are shut in they will begin to buzz, want to get out, and consume a lot of honey; dysentery follows, and the colony is ruined.

I have what I consider an ideal cellar. It is under the whole house, large and roomy, and 7 feet high, with a sub-earth ventilator 50 feet long to the west, where the most prevailing winds come from. The chimney runs down into the cellar, and there is an opening about one foot from the floor in the chimney. The walls are made of stone, but the floor is cemented. The walls are a foot above the ground, but on approach of cold weather they are made frost-proof by banking up with horse-manure and sawdust. The thermometer hardly ever varies more than 5 degrees until towards spring when the weather warms up.

Along the last of February, when the colonies become restless, we open the door or window at night, but it is always closed again before daylight so as not to coax the bees out. The cool, refreshing air stops their restlessness, and for days the bees are quiet again.

The colonies are stacked up in the southeast corner, entrances facing the front and not to the walls, for the reason that it is much handier to take a look at them, and, if necessary, to clean out the dead bees. And, by the way, is it not a pleasing sight in midwinter for the bee-keeper to see the large clusters of bees, perfectly quiet and contented, the best sign of perfect wintering?

The cellar is kept dark at all times except when we need something for the kitchen. A large curtain is hung in front of the bees, excluding all light, which I consider absolutely necessary. I have used both large and small entrances, and could see no difference in the colonies. I now use an entrance ½ inch by the width of the hive, and no trays or cushions of any kind are used, but an oilcloth over the top of the frames, and then the cover—that is all there is to it.

Some bee-keepers say it will not do to have vegetables in a bee-cellar. This cellar is packed full with vegetables of every description, and, as stated before, the bees winter successfully in every way.

In my opinion the following things are absolutely necessary to winter bees successfully in the cellar:

1st. Plenty of good stores.
2d. The cellar must be dry and warm.
3d. Good ventilation that can be regulated even in very cold weather.
4th. Perfect quiet, and total darkness.

If the above conditions exist in a bee-cellar there is no need of losing any colonies in wintering them therein.

ALLEN'S NON-SWARMING BROOD-EXCHANGE PLAN A PERFECT SUCCESS.

While reading Dr. Jones' book on swarm prevention, and also his article in the Review, I was very enthusiastic at first, and had about decided to try his method, when I read Mr. Allen's plan in the "old reliable" American Bee Journal, and I said to myself, "Here is something even better than the Jones' method."

Well, did Mr. Allen's plan work? Yes, I am glad to say it did, and I think it is by far the best swarm-prevention I ever tried. As there may be some readers of the American Bee Journal who did not read his article I will again give his method:

When the flow is well started go to the colonies, whether they want to swarm or not, and remove them from their stands, putting in their places hives filled with empty combs less one of the center ones.

Next, a comb containing a patch of unsealed brood as large as the hand is selected from the colony and placed in the vacant place in the hive; a queen-excluder is put on this lower story, then a super of empty combs, and on top of all an empty super. A cloth is then spread in front of this new hive, the bees and queen shaken from the parent colony, and the third story is filled with the combs of sealed brood, and brood too old to produce queens.

Now, I had to vary the plan somewhat. I did not have enough empty combs for the brood-chamber so I gave only 2 or 3 empty combs, then filled out the 10-frames with full sheets of wired foundation. I did not change the hives, simply left the old hive on its stand.

Twenty large colonies were so treated, and none even tried to swarm, and I received a large crop of honey in spite of the fearful drouth here. I can't say too much in favor of the above method. It certainly was a complete success with me. The whole operation is done at once, beautiful combs are drawn out, and the swarming fever is entirely satisfied. As the brood hatches out in the third story, it is filled with honey, and big results are obtained.

Now, I want to warn of one thing—be sure not to put up too young brood, otherwise the bees will start queen-cells. Three of my colonies did, but when the flow let up the bees destroyed the cells again themselves. None of the other 17 colonies started queen-cells. It certainly makes rousing big colonies, and is the method I recommend, and always shall use hereafter. I wish to thank Mr. Allen for giving this method to the readers of the American Bee Journal.

If we had a method like this to prevent swarming when running for comb honey, the swarming problem would be solved. Cutting out queen-cells once a week, giving large and deep entrances, top ventilation, and shading the hives, work best with me when running for comb honey.

La Crescent, Minn.

Something About Unfinished Sections

BY G. M. DOOLITTLE.

No doubt the readers of the American Bee Journal will be somewhat surprised when I tell them that later developments prove that Doolittle can not always have his way in having few unfinished sections at the close of the honey harvest. I know I have been telling in the past, how it was possible to have very few, by a system of condensation rather than expansion, after the middle of any of the blooms which furnish us with our surplus honey. And I still say I believe that is the correct plan to work on.

As the latter half of any of our regular honey harvests come on, instead of tiering up or putting supers of empty sections between those supers which are more or less completed and the brood-chamber, the supposed or hoped-for needed supers should be placed on top of those in which the bees are at work, for in this way, with good seasons, the bees will complete nearly all the sections they commence work in. But the past two or three seasons have convinced me that there always must be more or less unfinished sections (occasionally *more*), no matter how hard we work to have it otherwise, as the fact has been pressed in upon me, that, by a sudden and unexpected ending of the honey harvest through a prolonged drouth, or by a long-continued spell of rainy weather, the flow will be cut off, which circumstances can not be controlled by the bee-keeper. This being true, and without a possible remedy, after such a season in which our harvest has been suddenly cut off when work in the sections was at its height, it becomes necessary that we deal with the problem of what shall be done with this uncompleted work.

I used to be surprised at some of our otherwise good, practical bee-keepers recommending that all such sections should be burned after cutting out the combs and melting them into wax. This always seemed to me to be bad advice, bad economy, and very poor judgment. If we are to make the most out of bee-keeping for ourselves and our families, it would seem to be wisdom to concede the fact that close, economical management must play an important part in the business, especially with the lower price of our product as compared with most of the things we have to buy.

As I have written before, I consider these partly-filled sections about the "best stock in trade" there is in the apiary, and with the part we need as "bait-sections," better than money in the bank. When, by experience, through a term of nearly 40 years, I have found that bees will enter the sections more freely, and from a week to 10 days sooner, where the super contains a certain amount of drawn combs, I want these sections, and want them too badly to sanction the melting of the combs and the burning of the sections; no matter if the sections are not quite as new looking as are those put on "fresh" and filled with foundation.

There are several ways of turning these unfinished sections into cash. When the honey harvest is about closing, or drouth or rain has brought it to an untimely end, so that the loss is becoming greater through discoloration by what is known as "travel-stain," or by the bees removing the honey from the unsealed cells than is gained by a little greater completion, the supers are immediately put on the escape-boards so as to rid them at once of the bees, and as soon as this is accomplished, they are taken off and the supers stored in my honey-room, each super being kept away from its fellow by a little 2-inch-long by 1-inch-square block. As this room has a paper roof directly over it, with the roof and sides painted a dark red, the sun so heats up the interior that all the unsealed honey is rapidly ripened by the hot, dry air being able to circulate through the whole pile, and that which is sealed very much improved as to quality.

After being in this room for 2 or 3 weeks, the honey in the unsealed cells become so ripe and thick that it will not run out, no matter how roughly it is handled, or turned "flat side" down; while that in the sealed cells is so ripened that it will not candy in the combs, as is often the case with comb honey which is stored in a damp, cool room. When thus ripened, the completed sections are graded and cased ready for market, all being kept in this room until disposed of. Those nearly completed are also cased for market, as when kept by themselves and cased so that the outside gives a fair representation of all which are in the case, such will bring as much, within 2 to 3 cents, as will the best. At least that has been my experience during the past 10 to 12 years. Before that, when such sections were allowed to go in promiscuously with the other, they brought the price of the whole down to where it was better not to send them away at all.

Those which are less finished, but still valuable for the honey they contain, have their combs cut out, and the same put in what are here called "wooden butter-dishes," when these, holding about 2½ pounds are sold to those who come for honey, selling at from 25 to 30 cents for each dish, according to the source from which the honey was gathered, or its quality. In this way we receive nearly as much as is done from any of the crop, as the sections and shipping-cases "cut no figure," while the butter-dishes cost little more than a couple of mills each.

Those sections not as well filled, which have more value for baits than anything else, are treated in one of two ways: If I do not have extracted honey enough to supply the demand coming for the same, the extractor is gotten around, a fire built in the stove, which, together with the heat from the sun, raises the temperature of the room to 100 degrees or over, just in accord with the thickness to which the honey has ripened in these sections, when, in the afternoon, after the heat has tarried long enough so that the honey will extract easily, that part of the combs which is sealed is uncapped and the whole extracted, by putting these sections in "section-holders," made to hold a certain number, that number being governed by the size of the frame the extractor will receive.

In this way it is no great trick to extract the honey from the sections, after which they can be put out in hives, piled one on top of the other, with an entrance at the bottom large enough to admit only one or two bees at a time, when, in a few days, they will be cleaned up ready for using as baits.

If I think that from any reason there may be some colonies of bees the next spring, which through the shortness or the honey season the year before, of from any other unforeseen circumstance will be short of stores, and I have no reserved combs of honey to feed them, I let these sections remain as they are till I find out about this matter. If needed the next spring by certain individual colonies, the sections are uncapped and placed in a super which is set over such colonies, the top of the hive being covered over with a "quilt," all except a little space at one corner large enough to admit 4 or 5 bees going up at a time, when the sections will be cleaned and the colony fed at the same time, resulting to the advantage of both the bees and their keepers.

If it so happens that no individual colonies need stores in the spring, then these left-over sections are put into supers or hives and piled up one on top of the other, making all secure from bees except an entrance at the bottom large enough to admit not more than 2 bees at a time; when work on them will be commenced, and continue day after day till all the honey is carried away and quite evenly distributed among the most of the colonies in the apiary. In this case I do no uncapping, for the bees will do it themselves, leaving the combs in nice shape to be used for baits. Even where sections are stored away in the cold, so that much of the honey in the combs becomes candied, by giving to the bees in this way, the dampness gathered in the pile during the nights of May liquefies the grains from which the bees sucked the liquid the day before, so that they in turn become liquid, so that there is nothing wasted and the combs cleaned perfectly clean.

In these ways everything results to the advantage of the bee-keeper, who has "an eye to see and an ear to hear."

Borodino, N. Y.

What's a Non-Swarming Strain of Bees?

BY DR. A. F. BONNEY.

I do not write on this subject to discourage investigation, as has been suggested, but rather to encourage intelligent study. If a non-swarming bee is to be developed it will happen in spite of all I might write or say, while all the wishing, and striving, and longing man may indulge in will not alter Law one whit.

Men have striven for centuries to discover perpetual motion, and the secret of transmitting the baser metals into gold, firmly believing both possible. May it not be possible that bee-keepers are equally unscientific in seeking to develop a non-swarming strain? To try to answer the question I must ask: "What is a non-swarming strain of bees?"

I think such a strain would best be defined as bees which under no circumstance would swarm, but ever supersede their queens in the hive. A swarm of bees which, from being in the midst of a vast quantity of empty combs will go without swarming for many generations of bees, may the very next generation swarm repeatedly. As Mr. Smith, of Medford, Oreg., says: "You bet them their non-swarming bees will swarm *some time*," and the evidence points that way, for it is the nature of the bees.

Mr. Stephens, of this State, an old and old-time bee-man of original ideas, gave me a new idea in a recent letter. He says, "Their non-swarming bees are almost always weak colonies," and from what I have opportunity to observe, I think he has hold of Truth by an ear, for I do not know of a non-swarming colony—and I have had one or two such—that gave as much surplus as the bees which I let swarm once, putting the young bees back with the original colony.

As I mentioned before, a non-swarming colony or strain is one which will not swarm, else the name is a misnomer, just as a long-tongued bee has a long tongue or is not what it is called. It seems that once in a while there are bees which will work on red clover, but is it because they have long tongues, or that white clover is not yielding nectar? I am paying some attention to that question, but it is slow work, and I am more interested in the other question, or was until I found that not one percentum of the bee-keepers in the country believe such a bee possible. Now I have consigned them to the limbo of the moth-trap, the non-swarming hive, and the long-tongued bee, for I have never yet been able to find a strain of bees but what will swarm some time, the claims of their owners to the contrary notwithstanding.

Buck Grove, Iowa.

No. 3.—Points on Selling Honey

BY WESLEY FOSTER.

In my talks on selling honey, so far, I have dealt more especially on the personal qualities of the salesman than on the real conditions that are present for every honey salesman to master and bend around, if may be, to his advantage. The instructions to salesmen sent out from time to time emphasize the necessity of holding the aggressive attitude, never paying any attention to the objections of the prospective buyer any longer than to wipe them out, if possible.

Now it is necessary for any man who wishes to succeed in selling honey to be positive about the delicious quality of this product, but there are other things in the world besides honey, and we will do well to be broad in our view at all times, for we will sell more honey by admitting that maple sugar and syrup (if pure) ranks along by the side of honey as an article of food. I know some bee-keepers who will pay $2.50 for a fine, thick, pure maple syrup, and then sell their own honey for a dollar a gallon. Now a bee-man would do well to eat his own product, but a change is welcome at times, so we can readily see that we can not expect to sell all the sweets that are consumed. In fact, we may grant that corn syrup has its place, if it is not an injurious food product. Corn-syrup manufacturers, or rather their advertisement writers, overstep the mark when they say it is far superior to honey.

The condition that the honey-trade is "up against" calls for work along several lines in order to hold its own. The plans for advertising Nationally I hope may be worked out, and get farther than just talk. I think many of us have spent too much time at fairs and expositions in comparison to the time spent in educating our grocers at home the way to display and talk up sales of honey. I have great faith in store demonstrations; they come nearer the ideal way to popularize honey than the house-to-house canvass, even; for when we call at the lady's house she has that ever-present prejudice against agents to be overcome, while, if we find her in the store in search of groceries, she will give a willing ear to a strong honey-talk, re-inforced with a generous sample or taste.

I have made an attractive display in a large store where the windows were large, and spent Saturday showing the store customers the honey; and at noon of the next Monday morning heard a whole crowd of school children eagerly telling about the live bees in that store, and the pretty white honey they had made. I hardly think one of those children would fail to carry home an account of the wonderful sight he or she had seen up at the store. And parents' actions are influenced more by children than many imagine. There is not a store that I have ever heard of that was not anxious to get the bees and the exhibit once or twice every year. Where one shows a willingness to co-operate with the grocer to sell the honey he will always feel more like doing his very best, and remaining a staunch customer.

We should feel about our honey as some of our largest and most reliable food-canners do about their goods, that their duty is not done when their salesman has sold a grocery a big order of goods. If those goods do not sell readily these food-canners feel duty-bound to get out and work up trade among the consumers. That is one of the reasons why some houses have such an enormous business—they carry their goods to the consumer, and then the grocer can make more sales.

The picture I have shown is a view of the booth of the Colorado Honey-Producers' Association at the Pure Food Exposition in Denver. There is one very strong point about the arrangement of this booth, and that is, it is equally well arranged for showing the beauty of the goods, and the counters are fixed for the purpose of giving out samples of honey, selling honey, and the distribution of literature. So many exhibits show only the goods to the eye, while this one shows the goods to the eye and taste as well. This point is a valuable one for any who contemplate the exhibition at fairs.

A booth of this kind will require the help of three or four people to serve the honey samples, answer questions, hand out literature, and keep the booth always looking attractive. Live bees and a large reading-glass fastened to the observatory hive to make the looking at the bees more satisfactory, was the greatest drawing card, unless it was the giving out of samples of honey on crackers. The wax figures and various bee-appliances aroused much interest, and the mottoes, such as the one to be seen hanging near the center of the picture. caused favorable comment.

Every exhibit at a fair will be twice as effective for real stimulation of honey consumption if honey is served and sold right from the booth, for folks want to get closer than just looking.

Elbert Hubbard says he never feels so highly complimented as when some one calls him "Teacher." That is true of us all; we like to tell of the things that are interesting to us to those who will gladly listen, and this is perhaps the main reason why exhibiting at fairs and selling honey is interesting work for me. I like to tell what I know to those who want my knowledge. I never yet talked with an exhibitor at a fair—whether it was poultry, bees, honey or live stock that was his passion—who was not bubbling over with enthusiasm. And so this is why I believe every one of us would get more pleasure from our work if we would try and show others about it at the fairs, or in store demonstrations, or by

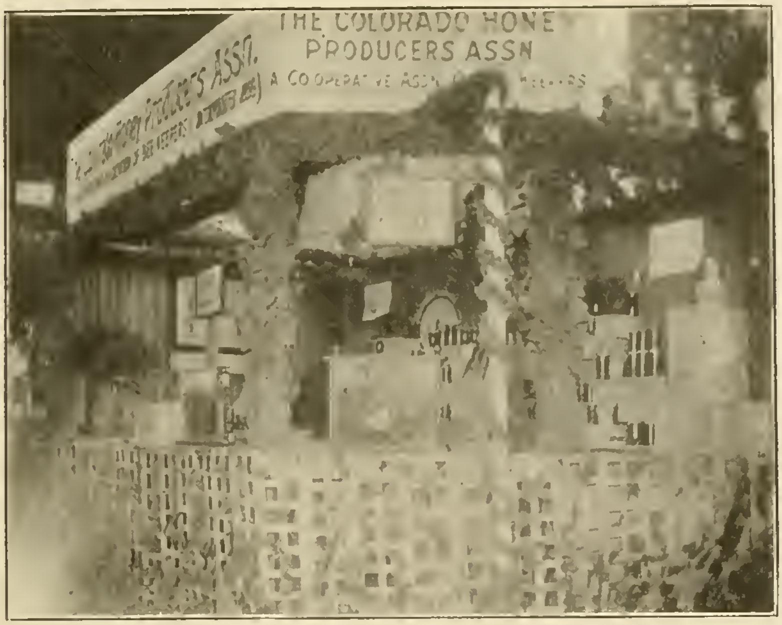

Exhibit made by the Colorado Honey-Producers' Association.

carrying a sample case on the road for a few weeks of each year. The experience will do any one good, and the work will be an education in business methods.

I do not see how I could close this any better than to append a few notes on "Salesmanship," which I used in a talk before the Business Science Club, of Denver, a club of young salesmen, all of them students of The Sheldon School of Salesmanship:

Salesmanship.

Salesmanship to be of the true and lasting kind must have manly character and fellow feeling as a foundation. The religious feeling of the unity and brotherhood of all men goes a long way in establishing the bond of confidence between two men.

Do you know why salesmen talk about the big problems that confront us as a people? I'll tell you. The boys who go up and down the country, and hardly get off the rusty ribbons of rails, see our national life and its questions in a broad light. Then their long separation from home (if indeed they have one) softens the spirit of the boy who sells goods. He is a kind of lonesome creature, and likes to see and meet genial personalities. Men of any depth of character will find a fine kind of patriotism springing up in their breasts after a few years of road-work.

So if you sell goods, sympathize with your customers and think of their problems as well as your own. Whether you sell a man or not, establish that comradeship; it will mean business later, if there is any chance. It pays you, any way, for we are here to enrich our lives, not our pocket-books, primarily.

A certain indifference in regard to selling goods is a valuable quality; it is an effective way of ending an interview. You have had the whole mind of your prospect focused on the goods—he knows just what they are—so you can take the attitude of "Take it or leave it." Your customer is quite likely to ask a few questions, and buy, if there is any reason for him doing so.

Put all the intelligence and sympathy into the selling talk possible. The whole matter of selling depends upon, does he have confidence in me? If he does, he will buy now or later. If he distrusts me he will never buy, unless he has to have the goods and can get them of no one else.

The charge is brought against so many salesmen that they are only "order takers," and the statement opens up the whole subject of efficiency in getting business. Now when one of these order-takers goes into a store, or before his customer, he holds the negative attitude mentally, and it shows in bearing, facial expression, and voice. If he does show any of the positive it is so weak that he is overcome by the objections of his prospective customer. In this case the man he tries to sell something works the persuasion the other way, and convinces the salesman that he could not use the goods, or at least that the odds are too great for him to overcome.

The power to meet all men with the strong whole-hearted, positive spirit will gain a respectful hearing for the entire proposition. This power enables one to meet objection after objection without arousing the dislike of the prospect. The work of convincing must be done with a light-hearted and joyous spirit. The man who is convinced against his will or inclination will, without doubt, cancel the order after you have left.

Some time ago a friend of the writer had the privilege of carrying the news of a large sum of money being left to a poor man who had a large family. My friend went with a feeling of elation, and finding the man engaged in a shop where he had to wait some time he did not wait with a feeling of fear lest he could not persuade the man of the property; no he waited with ever-heightening feelings of pleasure, for he knew when the man came out that the news would be joyfully received. When the man came out he was tired and worried with his hard task of supporting his family, and when my friend tried to tell him of the nature of his mission, he mistook his mission, and thought that there was some scheme on foot to take his little home away from him. My friend had here to overcome a suspicious prejudice, but he did not dismay, for he knew of the happiness there would be when the true facts were known.

This is the fault with most of the order-taking salesmen—they do not feel the value of their article or proposition strongly enough. Every one of us should feel as if our work was as important as carrying the gospel to the heathen, for in truth it is. Modern business is the great educator where millions go daily to get instruction in the ways of conducting life, and making things run smoothly. And by serving business are we helping to feed the millions who are here to find what life means for them. The more harmonious we can make it for people to meet their physical needs, the greater worth will they find in life. Life is full, and rich, and grand, and we need never feel that business is degrading. Let us go out and think well of our work, and fill it full of good cheer and fellowship, honesty, faithfulness, and true living.

A salesman should carry around with him the atmosphere of the "Zeitgeist," and by spreading this spirit will he be a world-benefactor.

Boulder, Colo.

Diagnosis and Treatment of Foul Brood

BY DR. G. BOHRER.

While I do not desire to invite unprofitable discussion concerning foul brood, it does seem to me that there should be a systematic method agreed and acted upon in unison by all bee-keepers who suspect that they have this very destructive ailment among their bees. I have special reference to the matter of diagnosis, for until the bee-keeper is absolutely certain as to which form of disease his bees are infected with, he is quite liable to treat for black or European foul brood as the American form must be treated, or he may treat the Amertcan foul brood according to the Alexander method of treating the black or European form, which method never did, and never will, rid an apiary of American foul brood. In making this sweeping declaration I speak from experience.

I had in my apiary what I confidently felt was American foul brood, judging from the offensive odor from the hive, and the ropy character of the dead larvæ. Other bees in this county were infected with the same ailment, and when I called upon our County Inspector to look after and stamp it out, one bee-keeper stated that it was not foul brood, and threatened to prosecute me for circulating such a report, assigning as a reason that I was doing him a very great injury. By so reporting, I at once sent a sample to Dr. E. F. Phillips, at Washington, D. C., who very promptly notified me that I had a typical case of American foul brood, which report put to rest the character of the malady.

It being understood that nothing short of a removal of both the combs and honey from the hive, and putting the bees upon new comb foundation in clean frames would effectually stamp out the disease, this method was adopted, and in a short time we got rid of the pest. It is proper that I should state further that in most cases the bees were put on narrow strips of comb foundation for two days, and then on to full sheets of foundation.

In the treatment of European or black foul brood the destruction of neither comb nor honey, it seems from reports, is necessary. Simply remove the queen and leave the colony queenless 23 or 24 days, then give them a virgin queen; and some say at the same time make the colony strong in numbers. The cure is regarded as complete. Thus it will be seen that there is no-removal or destruction of either combs or honey.

But an amateur, or any bee-keeper not familiar with either form of foul brood, is quite likely to mistake the American for the European, or the European for the American form, and in case of success in stamping out the disease, call it American foul brood when it is the European form, and thus unintentionally mislead many bee-keepers. When a sample of the diseased brood is sent to Dr. Phillips for microscopic inspection, it would put the bee-keeper on the right road to success and avoid the publication of misleading reports. To do this is no hard task. Dr. Phillips will gladly send boxes and mailing cards upon application, and, moreover, it will cost no postage to send samples.

In conclusion I will say that in one instance I put an infected colony on comb foundation, and after some 21 days found the bees in excellent condition, and feeling anxious to help them, I gave them a comb from the infected hive I had taken away from them, it being, from all external appearances, free from anything of an infectious nature; it contained a few cells of sealed honey and no unsealed honey that I could discover; but the experiment was a costly one, it being only about two weeks after giving them the comb referred to, until foul brood showed up again, and it came from no other source. So do not give such combs to bees.

Lyons, Kans.

Canadian Beedom

Conducted by J. L. Byer, Mount Joy, Ontario, Canada.

Again the Long-Tongue Bees

Dr. Miller, for a "boy" of your age, don't you think that you should know better than to try and stir up mischief the way you have done on page 342? Quite likely none of the sellers of the queens that produce bees with tongues long enough to impale a pumpkin, ever saw that reckless statement of mine, and now after all the prodding you have given by way of encouraging them to get after me, who can tell what the end will be?

If correct, the Cyprians hold the record as a race for tongue length, but as they are correspondingly long and active at their other extremity, they are little advertised. However, that has nothing to do with the statement you criticize, as I have never had any Cyprian blood in my yards, so far as I am aware.

As you are no doubt aware, the writer is not as keen an admirer of the Italian race, *in toto*, as are some bee-keepers, and this fact may, to some extent, explain the statement referred to, which was, as usual with me, hurriedly written without thinking just how it sounded. Not so very long ago the bee-papers were full of advertisers who claimed to have the genuine article, in so far as long tongues are concerned, and if it was the real thing they had, why the absence of said advertisements now?

Now as to personal reasons for making the assertion under discussion, I would say that queens were secured from different breeders making claims as to their stock having extra-long tongues, and so far as I could tell by close observation, not one of the claims was verified. True, sometimes these bees would be seen on red clover, but on those occasions the other colonies in the apiary would be represented just as well.

Please do not understand me as implying that the claims of individual measurements of tongues as given in some cases were false, but I do believe most firmly that anything out of the ordinary was in the nature of a sport, and that in few if any colonies was this characteristic perpetuated.

Perhaps the word "humbug" is not refined enough for modern purposes, and rather should the term "business enterprise" be used, as we find the same kind of advertising quite frequently in other lines, for instance, when we are told that certain syrups are "better than honey for less money," etc.

Just think for a moment what the claims of the long-tongued bees mean, anyway. One of the most essential parts of the bee's anatomy, no doubt of uniform size nearly all down through the centuries, has in the course of a few months by some marvellous, mysterious methods, been lengthened so that their proud owners could go poking into pastures that have been forbidden to their less fortunate predecessors for ages past. Is not the mere assumption of such a possibility ridiculous, when we consider the matter seriously?

Now I have nothing personal in view, in what I have said, but as it appears to me, it does not seem possible that much can be done in quite a few years, let alone months, in changing the size of one of the principal organs of the honey-bee. With you, I think that if the red clover honey is ever to be secured by the bee-keeper to any extent, that the work will have to begin at the clover end of the proposition.

In looking over what I have written, I note that I have not yet cleared up the "race" question. So far as I can recall, all the advertisers of long-tongued stock had Italians to offer, and as the best workers I have had on red clover have, as a rule, been Carniolans, this partial clearing of my skirts will have to suffice.

Many thanks, Doctor, for the kind expressions made in regard to the writer. My only regret is that I feel entirely unworthy of the compliments given, yet I trust that the good opinion of one whose friendship is so highly valued may serve as an incentive towards helping me to be more temperate in all things, not excluding the *statements* that may be made when writing for the bee-papers.

Report of the Ontario Convention

The Ontario Bee-Keepers' Association held its annual meeting Nov. 15th, 16th and 17th, according to schedule. The meeting was fairly well attended, but from the fact of there being single-fare rates given from all points in Ontario over the different railroads, the wonder is that twice as many are not in attendance at these meetings as is usually the case. From the standpoint of attendance, a regrettable feature was the absence of the large deputation from New York State that we expected to have with us. Indeed, some of the boys expressed themselves while at Albany as "coming sure," and when they failed to "show up" at our convention, we were at a loss to know what had happened—only Mr. Hershiser putting in an appearance, when we looked for a dozen or more. (For loss of a better reason, I surmised that perhaps all the absentees were Republicans, and being "snowed under," were unable to extricate themselves in time for the meeting! Then, again, the thought came that may be they were all Democrats, and as a result had "celebrated" too much to be in shape for traveling! Not being at all familiar with United States politics, I feel sure that I will not be accused of carrying political issues into this department; and if wrong in either of my surmises, I stand ready to be corrected.)

Pres. Couse occupied the chair in his usual genial manner, but as I was not present at the first two sessions, I am unable to say much about his opening address. Some of the members told me it was "all right," and knowing Mr. Couse as well as I do, I believe that all would concur in that view, even before we have a chance to see the printed report.

Mr. Sibbald gave an address on the subject, "A Year's Experience With Clark's System of Queen-Rearing."

This address being given also, at a session in which I was not present, it will have to wait till the report comes out before making any comments.

A Talk to Beginners.

Mr. A. Dickson, of Lancaster, gave a talk on "Lessons for Beginners," in which many valuable hints to prospective bee-keepers were given. Mr. Dickson, among other things, advised beginners to buy bees in the spring, and have some competent bee-keeper look them over before buying. Be careful to leave the honey on the hives till well ripened; give intelligent care in every way to the bees, and in the fall be sure that all colonies have abundant stores to carry them through till fruit-bloom the following spring.

Mr. Dickson is an enthusiastic admirer of the bee-escape method of clearing bees from supers for extracting, and said that he had brushed bees for 16 years before finding out the value of the escapes. Mr. McEvoy endorsed Mr. Dickson, but Mr. Chrysler and some others stated that while the advocates of escapes were adjusting these articles to the hives, they, with their methods, could have the honey away from the bees in the same time. Mr. Chrysler stated that all his escapes were for sale cheap. All of which goes to show how different methods appeal to different men in a different way.

Women as Apiarists.

Miss Ethel Robson gave a splendid address on the question, "Can a Woman Run an Apiary?" Miss Robson is a splendid platform speaker, and demonstrated without a doubt that a woman could run an apiary—at least, this was clearly proven in Miss Robson's case, as she gave facts and figures to prove the assertion. One of the amusing instances given to show how a woman can make the best of an emergency was the following:

As the family was starting for church one Sunday morning, a swarm was noticed coming from the apiary. Miss Robson told the rest to go on, and she would follow shortly, as she fully expected that the bees would settle in a hurry. However, they had no such intentions, and off they went across the fields with their mistress giving pursuit, firmly intending to "stay with them" as long as it was possible. They headed for a strip of woods, and alighted on a small tree, low enough down to be in reach. But how was she to get them to the apiary?—that was the query. A man would have had to tramp back a mile or so for some receptacle to carry them in, or else abandon them to their own devices. Miss Robson had no intention of doing anything of that nature, and quickly the inspiration came to utilize one of her skirts; and at once this resolve was put into action. The skirt was tied at one end and the bees shaken into the "swarm catcher," and carried home in triumph!

Mr. Sibbald volunteered the information that not a *man* in the audience could have done such a thing, and no one ventured to dispute the accuracy of the assertion!

In giving the reasons that led her to go into bee-keeping, Miss Robson said that after leaving college the world did not appreciate her ability to her satisfaction, and bee-keeping was then undertaken with three objects in view—she needed something to do; she wanted some money of her very own; and she wanted to show the people that she was good for *something*, after all. As an evidence that she convinced the Ontario Association of the latter fact, it is only necessary to say that they appointed her one of the directors. Miss Robson thus has the honor of being the first woman to be on the governing board of this Association.

Apiarian Exhibits — European Foul Brood.

Mr. Morley Pettit gave an address on the subject, "The Large Exhibitions and the Bee-Keeper," in which the fact was made apparent that for big exhibits, the Counties or Provinces should take up the work together, under the auspices of the head association.

The discussion that followed was right in line with that idea, and quite likely, by another year, a radical change from the present system of exhibits will be in evidence.

Mr. Pettit also gave a general resume of the year's inspection work, as furnished him by the 16 inspectors who were on the force during the past season. Nothing new was brought out, only the fact was impressed on us again most forcibly, that foul brood is still with us in many localities—in some to quite an alarming extent. Black brood has crossed the border on the Niagara peninsula, and is spreading badly in the eastern part of the Province. While the most of us have different views on the tariff question, all on this side of the line are in favor of a *prohibitive* tariff on the disease known as black or European foul brood. Pity is that the matter was not attended to sooner.

Young Men as Bee-Keepers.

Mr. Homer Burk, one of our successful young men, gave a talk on "Bee-Keeping for Young Men," in the course of which many encouraging thoughts were brought out as to the inducements of the calling. In his opinion, we do not appreciate the efforts of our forefathers enough, as they had paved the way for us today, making it possible for us to operate a great many colonies with less labor than was formerly necessary for a small number. Bee-keeping is fast becoming a business recognized to be very important, and, all this considered, we have much to be thankful for in the pursuance of our chosen vocation.

Disposal of Cappings.

Mr. Chrysler talked on the disposal of cappings, in which many valuable points were brought out. The capping melter came in for a good deal of discussion, and in the main the machine was not appreciated very much. Mr. Pettit showed one made somewhat on the Beuhne principle, and at some future time I hope to illustrate it in this department. According to Mr. Pettit's views, it is the best thing in the line of capping melters that has thus far been brought out.

Co-operating with Honey Customers

Mr. Couse gave a talk on co-operation, dwelling mostly on the line of co-operating with our customers in the way of increasing sales, but saying little about the matter of the producers getting together in an extensive way for the systematic handling of the honey crop of the Province. On this phase of the matter of co-operation, Mr. Hurley, of the Canadian Bee Journal, gave a most masterful address, and clearly showed that he had given the matter a lot of earnest study. At a later date I hope to have the address in full—to comment on it briefly would in no way give the force of his arguments. The subject received a lot of discussion on the part of many members, and as a start a committee was appointed to look into the matter and see as to letters of incorporation, etc., $50 from the funds of the Association being voted to defray the expenses of the committee.

As stated in the past, while thoroughly in sympathy with a co-operative movement of some nature, yet I feel that with present good prices ruling, it will be difficult to get enough bee-keepers interested to make the scheme a success. All the fruit-growing and other co-operative organizations have been *forced* by circumstances to their present status—whether the bee-men will be wise enough to co-operate without being forced to do so, remains to be seen.

The officers for the following year are as follows:

President, W. J. Craig, of Brantford; 1st Vice-President, Denis Nolan, of Newton Robinson; 2d Vice-President, J. L. Byer, of Mt. Joy; and Secretary-Treasurer, P. W. Hodgetts, Parliament Buildings, Toronto.

Directors:—Division No. 1, A. Dickson; No. 2, A. MacLaughlin; No. 3, M. B. Holmes; No. 4, C. F. Chisholm; No. 5, Jas. Storer; No. 6, J. L. Byer; No. 7, J. F. Switzer; No. 8, U. H. Bowen; No. 9, W. J. Craig; No. 10, D. Chalmers; No. 11, Miss Ethel Robson; No. 12, D. Nolan; and Ontario Agricultural College, Morley Pettit.

"Langstroth on the Honey-Bee"

This is one of the standard books on bees. It tells in a simple, concise manner just how to keep bees. It was originally written by Rev. L. L. Langstroth, who invented the movable-frame hive in 1851. The book has been brought right down to date by Dadant & Sons, than who there are no better or more practical bee-keepers in this or any other country. It contains nearly 600 pages, is fully illustrated, and is bound in cloth. Every topic is clearly and thoroughly explained, so that by following its instructions no one should fail to be successful with bees. Price, postpaid, $1.20; or with the American Bee Journal one year—both for $2.00. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

Worth Many Times Its Price.

To one who takes an interest in honey-bees, the American Bee Journal is worth its price many times over.

Tacoma, Wash. P. A. Norman.

Dr. Miller's Question-Box

Send Questions either to the office of the American Bee Journal or direct to
Dr. C. C. Miller, Marengo, Ill.
He does NOT answer bee-keeping questions by mail.

Size of Winter Hive-Entrance

How large should the hive-entrance be in winter? Does it make any particular difference whether it is in the center or at one corner of the hive? Illinois.

Answer.—In the cellar the larger the entrance the better; at least as large as in summer, and better if larger. But you no doubt winter your bees outdoors, in which case you need an entrance ⅜ inch deep, and an inch wide for every frame covered with bees. That would make it 5 inches wide for a colony strong enough to cover 5 frames, and 4 inches wide for colony having bees on 4 frames, if you think it advisable to winter so weak a colony.

Granulation of Honey

I would like to know why some honey granulates sooner than others, and some not at all. California.

Answer.—Temperature and other conditions make a difference, but I don't suppose you refer to that, but to the fact that under exactly the same conditions one kind of honey will granulate sooner than another. It depends upon the plant from which the honey is obtained, but that doesn't answer the question, and I don't know why honey from one plant granulates sooner than that from another. Possibly some scientists can tell us.

Honey from Foul-Broody Colonies

What can be done with honey from colonies having American foul-brood? I found 5 among some that I bought. My bees were doing well enough drawing out foundation, and for that reason I would not endanger the rest. (I am a beginner.) Otherwise they seemed to be in fine shape, so I closed them up the evening I found it out, and poured in some bisulphide of carbon, and it has not spread. Subscriber.

Answer.—The honey from foul-broody colonies is all right to use on the table, but it must not be fed to bees unless first boiled enough to destroy all germs that may convey the disease. It will not do to let the honey be full strength when boiling, for then the outer part may burn while the inner part is not hot enough to destroy spores. Take as much water as you have honey, heat the water and then pour in the honey, and let it boil for 3 hours.

Introducing Queen and Requeening

1. About Oct. 19, I received 6 untested queens, and succeeded in introducing 5 of them safely, but the 6th was killed, and that colony began to build queen-cells. The queens were used to requeen 6 colonies that had old queens. What is the best way to requeen?

2. Are the fall months the best time to requeen? Pennsylvania.

Answers. 1.—Your question is so broad that it can hardly be answered without writing a whole book. I suspect, however, that you mean to ask for the best way *to introduce* a queen. Even then the question is too broad. A queen in a nucleus in one's own yard is a different thing from one received by mail. A queen that costs 5 or 10 dollars is a different thing from one that costs only a dollar. But I'll try to guess what may hit your case.

It may be that you have in mind a very valuable queen. In that case I would take no chances, but proceed in a way that is entirely safe. Have ready 3 or more frames of sealed brood, much of it just hatching or about to hatch. Brush every bee from these frames and put them in a hive, putting with them combs containing some honey, and a comb in which you have sprinkled some water. Shut the hive up bee-tight. Keep it in a warm place where the temperature never goes below 70 or 80 degrees. Or, you may set the hive over a strong colony with wire-screen between the two stories, so that the heat may ascend but no bees get up from below. In 5 days set your hive on a new stand, giving an entrance only large enough for one bee at a time, enlarging the entrance afterward as needed.

The other safest guess is that you have received by mail a queen for which you have paid about a dollar. In that case, likely the best way is to follow the instructions that accompany the queen. You will take some chances in that, for there will be some failures in almost any way of introducing queens. If you don't want to take any chances, then follow the plan given for the more valuable queen.

Now if I have not made the right guess as to the part of your question you want answered, please come again, specifying a little more particularly.

2. All things considered, probably they are, although circumstances alter cases.

Dimensions of 8-Frame Hive

1. What are the dimensions of an 8-frame Langstroth hive and super? Also the frames? Massachusetts.

Answer.—Some of the dimensions of the 8-frame hive have varied from time to time, but I'll give you what I think will generally be found today:

Length, inside measure, 18¼ inches; width, 12⅛; depth, 9⅜; but as the driest lumber you are likely to get will shrink somewhat, it is better to make the depth 9½. The super has the same length and width as the hive, Its depth depends upon what it contains. If it is an extracting-super, it will be the same as the hive-body, provided the frames are to be the same as those in the brood-chamber. In any case the depth of the extracting-super will be ¼ inch more than the depth of the frame to be used in it, allowance to be made for shrinkage if there is to be any shrinkage. The depth of the section-super must be such that there shall be ¼-inch space left at the top of the super.

The frame is 17⅝ by 9⅛, outside measure. Width of top-bar varies from 1⅛ down to ¾; and the same may be said of end-bars and bottom-bar. Some have the same width as the top-bar, and some have them narrower. In any case, the frames are generally spaced so that the distance from center to center shall be 1⅜; although some prefer 1½. With the spacing 1⅜, there is plenty of room for a thin dummy or follower beside the frames.

Questions by a Beginner

1. How can I tell if the bees are short of stores?

2. There are a great many dead bees in front of one hive. What is the cause of it?

3. The live ones are very lively, and of a bright yellow color with 3 stripes across the tail? What kind of bees would you judge them to be?

4. How can I tell if moths are doing harm?

5. Can old, mothy hives be cleaned so that they will be fit for the bees again? If so, how is the best way to clean them?

6. Can I put my bees in clean hives now, or would it be any benefit to change them?

7. Do dones ever appear on the outside of the hive? If so, how can I tell them from the other bees?

8. Where would I be most likely to find the queen?

9. How long is the breeding season, and when does it begin?

10. Should my hives be covered up during winter? Missouri.

Answers.—1. One way is to look in the hives. So long as you see sealed honey at the upper part of the combs, the bees are not in immediate danger of starvation. If they have the equivalent of 4 combs filled with honey, they will have enough for winter. You may also tell by weighing. If the hive, bees and all, weighs 40 pounds more than the same kind of a hive with no bees and empty combs, you may count they will winter through.

2. I don't know. It is possible that a stray swarm attempted to enter and part or all of its bees were killed.

3. Probably Italians.

4. You may generally count that moths are doing no great harm so long as a colony is very strong. At this time of year you need not pay any attention to them, but when warm weather comes next year, if you suspect moths, you can lift out the frames and see whether they have built their silken galleries on the surface of the comb.

5. Yes, all you need to do is to scrape the hives clean.

6. Better let them alone until they fly freely next year.

7. Yes, during the working season you may see them flying out almost any good day some time during the middle of the day. You can tell them by their larger size. If you want to make sure, catch one, and if it doesn't sting you it's likely a drone.

8. The queen may be in any part of the hive; but is generally found on the brood.

9. If bees are cellared, there will be little or no breeding until they are taken out. The queen begins to lay sooner if bees are wintered outdoors, often as early as February and sometimes even in January, in the North, and earlier in the South. She may stop laying in October or September, and sometimes as early as August.

10. Yes; especially on top.

Keeping Bees from Spotting Clothes

I have kept about 8 colonies of bees in the city with good success for 5 years. Although my neighbors are only about 30 feet away from the bee-house, they have never been stung. But I have had trouble every spring when the bees take the cleansing flight, and spot the neighbor's wash. Now I would like to ask how to avoid this. I keep the hives in a bee-tight house. I have tried to close the entrance with screen on wash-day, but that killed many bees on a warm day. I also tried the way described in "A B C & X Y Z of Bee-Culture," page 65, but it did not work. Now I have planned to build another house out of wire-screen in front of the entrances to the hives, with a movable front, have the front closed on the critical day, and open on all other days. Would the bees cleanse themselves in the screen-house? If so, how big should it be? Wisconsin.

Answer.—No doubt the scheme will work if the screen house is large enough. How small an enclosure will do is only a matter of guessing. Fifty feet each way would probably work nearly as well as to have everything entirely open, but such a size as that is of course out of the question. It is possible that 10 feet each way would work pretty well. Even with the chance to fly only 3 or 4 feet away from the entrance the bees might not suffer much, and of course the more room the better. But, mind you, this is only guessing.

Slope of Hives—Hive-Ventilation—Wintering Bees

1. How much should a hive slope forward, 1 or 2 inches?

2. How is the best way to ventilate hives in winter?

3. Is there any danger of bees smothering in winter?

4. Is it all right to leave the honey-board on in winter, taking out about 4 inches through the center over the brood-frames, and leaving on one super filled with cloth and excelsior, then putting on the winter-case? Illinois.

Answers.—1. It is not a matter of great importance as to the exact pitch; either will do.

2. In the cellar it matters little how, provided there be enough ventilation, and there is no danger of having too much. Formerly, with box-hives, a good plan was to turn the hive upside down, with no covering over it. That left it all open above and all closed below. Of course, no sort of hive-ventilation will avail if the air in the cellar be impure.

For outdoor wintering, the entrance may be ⅜ by 6 inches for a strong colony, and less for a weak one; besides this opening at the entrance, some cover with some sort of packing that allows a little air slowly to pass upward. Others leave the cover sealed down as the bees left it in summer and fall. But in this case the top must be warmly covered.

3. The entrance may be filled up by wet snow which freezes, closing the entrance entirely, when there is danger of smothering.

4. It would be likely to work all right.

Getting Empty Combs for Swarms, Etc.

1. This year I have been running for extracted honey so as to get empty combs for swarms next summer. Would you use such combs, or would you use foundation in the

brood-chamber? I use the divisible brood-chamber hives, and like them.

2. Do you know where Editor York gets his queens? I got qeeens from him and they are first-class honey-gatherers, and they are gentle. I handle them without using the smoker. ILLINOIS.

ANSWERS.—1. It will probably be better to use the drawn combs, as there will be just so much advance in the work.

2. I don't know where he gets them; but I understand he has one or more reliable queen-rearers to rear them for him.

A Beginner's Questions

1 Will you give me a list of the most essential supplies a beginner should have?

2. How can honey stored in sections be fed during the winter?

3. After brood-rearing stops, do the bees store honey for winter in the brood-chamber?

4. Would 2 supers be enough to get for each hive?

5. What size smoker is the best to use?

6. In using a division-board feeder, would it be all right to take out one frame and allow the feeder to remain until spring? ILLINOIS.

ANSWERS.—1. The most essential things for a beginner are very few, although there are many things he will want to add afterward. The things to be added will be not always the same for all bee-keepers; for instance, a man who never expects to produce extracted honey will need no extractor, while for many an extractor will be indispensable.

As perhaps deserving first place among the most essential things for all beginners is a bee-book, or book of instruction in bee-keeping. And you have done a wise thing in reading up before getting any bees. Of course, the beginner must have bees and hives for them. He will also want a veil, smoker, and some kind of a hive-tool, if it be only a screw-driver. With these few items he is in a fair way to make a beginning, adding other things as they are needed.

2. If there is a 2-inch space under the bottom-bars, as there is in my hives, the sections may be slid under, lying flat. A wide-frame, filled or partly filled with sections, may be put in the hive near the cluster. If you do not use wide-frames, a common brood-frame may be used. To put 4 or 8 sections in a brood-frame, it will probably be necessary to cut away a part of one or more of the sections. If the arrangement on top will admit of it, sections may be laid flat on top of the brood-frames, and covered up warm.

3. Maybe, and maybe not. Some colonies stop breeding earlier than others. In some places and in some seasons the honey-flow continues later than in others. But in no case will you probably ever find it happen that breeding suddenly stops while the hive is full of brood, with practically no room for honey, and then the bees fill up with honey. Toward the close of the season breeding gradually becomes less, and as the combs become emptied of brood they are filled up with honey, there being only a very little brood in the hive when the queen stops laying.

4. You can get along, after a fashion, with only one super, but it is very poor economy to scrimp in the matter of supers. If you mean extracting supers of the same size as the brood-chamber, 3 would be better than 2. For sections, I would not like to start in the season with less than 6 supers of 24 sections each for each colony.

5. I never saw a smoker too large, although with only one or two colonies you can get along with a small one. Sometimes you want a bigger volume of smoke than a small smoker will give, and you can use just as little smoke as you like with a large smoker. The large smoker holds fire better than the small one, and you can more easily have fuel to fit the large one.

6. Ye-es, I guess so.

Foul-Broody Hives — Wintering Bees — Clipping Queens—Requeening

1. Last winter I purchased four 1½-story hives at a public sale for 80 cents each. After getting them home I found the combs chock-full of foul brood. Of course, that taught me a lesson not to buy second-hand hives; but what am I to do with them? All the frames and inside pieces were burned, and the inside of the hives have been thoroughly scorched with a kerosene torch. Most of my hives are 10-frame, but these are 8. Do you think it would be safe to put bees into them next summer, or would you advise me to make kindling wood of them?

2. Do you think it is necessary to have an empty super containing leaves or chaff over the brood-nest for wintering?

3. My hive-covers consist of a ¼-inch inner cover just above the bees, then a ½-inch air-space, then a sheet of straw-board which is covered with galvanized-iron; then I have about a foot of straw over and around the hives. Is that sufficient protection?

4. Would it not be better for a busy farmer to risk a few absconding swarms than to clip the queen's wings?

5. I have 8 colonies which stored 50 to 75 pounds of honey while others stored 100. Would you advise me to requeen the 8? If so, what would be the cheapest and simplest way to do so? I have but 12 colonies, and am a beginner. If I must requeen I would like to do it before they increase.

6. I have 6 colonies of bees on half sheets of comb foundation, and the result is the lower half of the combs are mostly drone-comb. Now if I simply cut this out next spring, will they build drone-comb again? Or how can I fasten foundation in the lower half of the frame?

7. There are foul-broody hives 1⅛ miles on either side of me. Is there danger of my bees getting it at that distance? NEBRASKA.

ANSWERS.—1. Being thoroughly scorched with the torch, they are safe to use again. Indeed, many use them again without anything being done to the hives at all.

2. No, there is no need of a super, only so the hive is well packed, especially over the top.

3. It ought to be.

4. A busy farmer is the very one who should have his queens clipped. It is a very small matter to clip a queen, and when a swarm issues it is much less trouble to hive it with a clipped queen. All you have to do is to catch the clipped queen as she hops over the ground, set the old hive off the stand, put the empty hive on the stand, and then when the swarm comes back and begins to enter the hive, to let the queen run in with the bees. No matter if the swarm settles on a tall tree; just wait till it is ready, and it will be sure to come back to the hive.

5. Probably the easiest way for you is to use the plan recommended to "Iowa" in this number.

6. If you let the bees build it in again, they will likely fill the vacancy with drone-comb. Cut the drone-comb in all. Then cut the worker-comb out of one frame and fill out another frame with it.

7. There is danger, but not so much as if the distance was less.

Cellar-Wintering of Bees—Rearing and Introducing Queens

1. I have a few colonies of bees that I have put into a cellar where there is no fire. Do you think it would be all right if it should get too cold there any time this winter, to move them into a cellar where there is a fire?

2. Does noise bother bees when they are in the cellar?

3. I have one colony of bees which I think are much better workers than my other colonies, and I would like to get some queens from that colony and put in with the others so as to get better workers. I would like to get at least one queen for a colony of black bees. How can I rear a queen from this colony?

4. When is the best time to introduce a queen to a colony of bees?

5. Can more than one queen be reared from a colony in one year?

6. Can you tell when there is more than one queen in a hive? If so, how? IOWA.

ANSWERS.—1. Yes, only be sure you do not have the cellar too warm and close. But with plenty of fresh air coming into the cellar, my bees do not seem much troubled by having the temperature go up to 50 degrees or higher. If a fire is such that it shines in the cellar, there is danger that the bees will fly into it.

2. Noise seems to have little effect upon them.

3. From the colony with your best queen take two frames with adhering bees and the queen, and put them in an empty hive on a new stand. In 10 days you ought to find a number of sealed queen-cells that may be used wherever you like, and after the cells have been taken the queen may be returned. Kill the black queen 8 days after requeening your best colony, and then 2 days later give to the black colony one of the sealed cells.

Another way may suit you. Take from your best colony the frames that have little room in them, and exchange for frames from other colonies well filled with sealed brood. This will make your best colony strong, in the hope it may swarm first. Now suppose A is your best colony, B is the strongest of the remaining colonies, and then come in the order of their strength, C, D, E, and so on. When A swarms, set the swarm on the stand where A stood, and set A on the stand of B, putting B on a new stand. All the field-bees of B will join A, making it quite strong again. In something like 8 days it will swarm again. Set the swarm in place of A, set A in place of C, and set C on a new stand. Perhaps 2 days later, A will again swarm. Set the swarm in place of A, set A in place of D, and set D on a new stand. If A swarms a day or so later, set it in place of E, and so on. Every one of those swarms will have a young queen of your best stock, and if the swarming gives you more colonies than you desire, you can break up one or more of them to strengthen your swarms that have queens of the best stock.

4. That depends. If you want to introduce a new queen for the sake of rearing better stock from her, it will be better to do it somewhat early next year. Other things being equal, there is no better time than about the close of the honey-flow.

5. Yes, hundrds of them.

6. You can not easily tell. Look through the hive, taking the frames out one by one, and if 2 queens are in the hive you may see them. But if you see only one, you can not be at all certain that there is not another queen in the hive. If you want to make certain about it, remove the queen for 3 days, and if you then find plenty of eggs present, you may know that another queen is still in the hive. If you have removed the only queen, you will find in 3 days that queen-cells are started and that no eggs are in the hive.

Reports and Experiences

Had a Good Honey Crop

I have had a good honey crop. I fed my bees last winter and early in the spring. My neighbors' bees nearly all died last winter; out of 150 colonies only 9 went through the winter. I lay all my success to the American Bee Journal and "Forty Years Among the Bees." Good luck to the "Old Reliable."

Fortuna, Mo., Oct. 31. L. M. JOHNSON.

An Amateur's Good Report

I am an amateur in the business. I have 12 colonies, and their production has exceeded 100 pounds of extracted honey per colony. I sold nearly all of it at 10 cents per pound.

I wish the American Bee Journal success. No bee-keeper can do without it.

Corinth, Ky., Nov. 1. J. C. HALL.

Good Crop—Fighting Foul Brood

I think the American Bee Journal is one of the best bee-papers published. It has helped me to a good crop of honey this year. From 70 colonies I have taken 10,000 pounds of honey.

I have had lots of fun fighting foul brood in this vicinity. I think I have had as much fun as Dr. C. C. Miller had with this disease.

T. L. SHAWLER.

Silver City, Iowa, Nov. 1.

Bee-Keeping in Missouri

There was a big show of farm products held at Moberly, Mo., in September under the auspices of the Missouri Immigration Board, and products from most of the counties of Missouri were shown. I was there; and while the program was full for speakers on that occasion, yet when the committee found that I would talk on bees, I was given a place. My address was well received. Just before the address a noted fruit-grower read a paper, and he stated among other things that they had tried fruit-growing out in Colorado, and had met with poor success until they secured bees there, when they had splendid success. I used this and other circumstances of like character to show the importance of the bee-industry.

We have over 40,000 bee-keepers in Missouri, according to the Labor Bureau, and the industry amounts to considerably more than a million dollars per year; that, with the help that bees are to fruit-growing, makes the keeping of bees quite important.

We bee-keepers of Missouri had our State convention at Sedalia during the State Fair week. We had a good and harmonious meeting. I was re-elected president, Mr. Stewart, of Hopkins, vice-president, and M. E. Trible, of Marshall, secretary and treasurer. Our foul brood inspector, M. E. Darby, was in charge of the apiarian exhibit at the Fair, and it surely was a nice one, and much the best we have ever had. He showed a map of Missouri built out by the bees, which attracted much attention and comment. He also had a large exhibit of honey, some of which was as nice as any I have ever seen anywhere. This exhibit was a great advertisement for the bee-industry, and Mr. Darby merits great praise for his skill in making such a good show. He is doing much excellent work in Missouri for the industry, as he is attending the fairs and congresses of the Immigration Board at different places in Missouri, and making addresses and doing things for the bee-business. He is considering a show at St. Louis at the coming Land Congress in December, I think.

We think, in Missouri, that the bee-business is looking up, and will take its proper place among the other industries of the State. We are working to that end in our Association, and we have a goodly number of bee-keepers on our roll as members; yet there are hundreds that are not members, and who do nothing toward helping in this matter, and we need them. Our inspection work is doing all possible under the conditions it has to encounter, yet this could be much extended if we had more help in membership and forces, as we could secure a better appropriation and help to carry on the work; so many are indifferent about making any effort at all to help, only themselves.

J. W. Rouse.

Mexico, Mo.

Bees Packed and Honey Sold

Winter weather commenced Nov. 5, with 6 inches of snow and cold weather up to now—Nov. 10; and still coming. My bees are all packed but about 100 colonies. Honey is all sold at a good price, and orders for 10,000 pounds returned—for buckwheat extracted, which is growing in favor with many.

W. L. Coggshall.

Groton, N. Y., Nov. 10.

Splendid Fall Honey-Flow

I have had a splendid fall honey-flow; 2700 pounds of fine honey from 30 colonies is the record of the past season in spite of the fearful drouth we have had. Goldenrod, heartsease and asters were abundant; in fact, the whole woods was like one large flower-garden. During the cold and backward spell we had in May, and while other bee-keepers let their colonies starve, my bees were fed and again given the best of care. During the drouth keeping them up to their best is, I think, one reason why they have done so well.

G. A. Barbisch.

La Crescent, Minn., Oct. 28.

Anti-Spraying Law Needed

In the spring of 1909, and last spring (1910), we had the heaviest loss in bees through the Shenandoah Valley that has ever been known in Virginia. The principal cause seems to come from spraying fruit-trees when in full bloom, with arsenic of lead. The bees that died seemed to have plenty of old honey in the hive and were starting to rear brood, but when they commenced to work on the fruit-bloom, you could go to the hives in the morning and raise them from the bottom and find handfuls of dead bees, until the whole colony was dead.

The northern and western parts of Virginia have become a great fruit-growing country, and the fruit-growers have been spraying their trees when in full bloom with arsenic, to protect from the codling-moth; and when our bees sip the nectar from the bloom they get the poison which is death to them. They do not realize the benefit our bees are in pollinating their fruit that they may receive a good crop, and it would be plenty of time for them to wait until the petals fall to spray for the codling-moth.

We bee-keepers of Virginia have no association that I know of, and what we want to do is to get together and organize an association so that we may formulate a bill to put before our Legislature, to prohibit the spraying of fruit-trees until the petals fall, so that our bees may be protected and have the benefit of the first nectar that Nature has provided for them. We also want to get the fruit-growers together and explain to them the benefit our bees are in producing a crop of fruit, and show them the heavy loss they are bringing upon us bee-keepers because of their ignorance.

Now, bee-keepers, we are in need of some protection, and I trust that every bee-keeper of Virginia who reads this will take some interest in this matter, so that we may get together and have some protection for our little busy bees before the spring of 1911. We also would be glad to have bee-keepers from other States give us some assistance.

T. A. Crabill.

St David's Church, Va., Oct. 20.

Honey All Sold—Bees in Fine Shape—Honey-Tea

It is impossible to get a carload of honey in this (Unita) county, as there was a California man here this fall and bought every pound of honey he could get. I do not think there are 500 pounds to be had here at any price. I have sold every pound I had to spare.

Bees are in fine shape for winter. We had a good crop of fine honey, but lost half of it on account of cans. I got mine Sept. 5, 1910.

Geo. Thorne has tried making tea out of honey for bad colds, and has learned that it is fine. Please try it and see what it will do for a cold in your climate. Make it and drink it as hot as you can, just before going to bed; or not drink it so hot, two or three times a day.

G. W. Vangundy.

Jensen, Utah, Nov. 10.

A Good Report from Kansas

I have been reading the American Bee Journal off and on for the past 12 years, but don't remember reading a word from a Washington Co., Kan., bee man or woman, so I will tell my experience in this part of Kansas.

I bought a farm 6 years ago for $5000, but had only $500 to pay down on it, and now I have it all paid for, have built a big barn, a 30x52 foot basement under it, and also a new house. I have never had more than 12 to 15 colonies of bees, and they have always paid my taxes, fenced my farm hog-tight, and cross-fenced it hog-tight, and we always have enough honey to eat. I got 1800 pounds of comb honey the past summer, and had only 12 colonies. I had some colonies that gathered 200 pounds. The bee-pasture is very good here. We have what is called smartweed—or oxheart as some call it—and alfalfa, by the hundreds ot acres. Italian bees are the best kind according to my experience. They get more honey from the alfalfa. We have also a wild cucumber vine that is a great honey-plant. I sold my honey for 12½ cents per section this year. I use 4¼ by 4¼, and 7 to the foot, and full sheets of foundation in sections and brood-frames.

I suppose there are a great many readers who wonder what we raise in this part of the Globe. I raise corn, oats, kaffir corn, sweet-corn, cane, buckwheat, hard wheat, cattle, horses, hogs, poultry, potatoes, and all kinds of garden truck.

We were married in 1903, and have one little girl 5 years old. She helps me with the bees quite a bit, and $10,000 would not buy our home today. The bees never let us get hard up.

D. W. Rupp.

Washington Co., Kan., Nov. 24.

Black Bees for Maine

This is a potato county instead of a bee county. We have grown in this county, this season, 20,000,000 bushels of potatoes. We grow more potatoes than any other county in the United States. Still, we keep a few bees up here near the North Pole, and the quality of honey produced I don't think is excelled anywhere in this country, and certainly it is not equaled in the eastern part.

My bees are in very good condition to go into the cellar this year. We all winter our bees indoors here, as the winters are long and cold. Bees go into winter quarters about Nov. 15th to 25th, and are taken out about April 15th to May 1st. It is often they do not get a real good flight during the month of November.

A bee-keeper starting this season with 74 colonies of black bees and 2 Italians, secured 1½ tons of comb honey and one ton of extracted This, in a land where the surplus flow is only about 4 weeks long, and often with days of rainy weather, is not so bad a showing for the despised blacks, for which you have nothing but contempt, is it?

At our recent meeting of bee-keepers the question was asked, "Which have you found the best bee, the black or the Italian?" Every one who had tried them said the black, or our native bee is best. "Let the Italians alone." Are we all crazy up here, or does locality make a difference, after all? The man who tells the story of the luberman's wife being a negress may create a laugh, but that is not reason or logic. Facts are what give weight to an argument. I do not know of a single instance in this county where Italians have been tried but that they have been discarded for the native bee. Better be fair in this matter and see if the other fellow might not be right in some cases, even in the minority.

Is it possible that our native bee is not the genuine black held in contempt by Italian queen-breeders and Italian bee-keepers? They are not jet black, but nearer brown, showing distinctly the gray rings. I had a queen from Texas this fall, a Banat, and I suppose her escorts were of her own family, but I could not tell them from our native bee except being a trifle smaller, which, I think, was due to their long confinement with only candy for food.

O. B. Griffin.

Caribou, Maine, Oct. 27.

No Black Bees for Him

I am really surprised to "hear" through the American Bee Journal the words of praise for the black bee by prominent men. Allow me, therefore, to express my experience with the blacks.

In 1870 my father got a colony of bees which were "little blacks." We had them for 4 years, and during that time their quality remained the same. For 3 reasons I found them objectionable; they were slow breeders, poor honey-gatherers, and quick stingers. I know once, when a swarm issued, that man and beast had to seek refuge in a bee-tight shelter. These traits seem to be characteristic of the blacks, if they are all like the specimen which I observed so long. I agree that they are not worth the powder to blow them up, but they are worth their flight-hole closed up with a rag dipped in melted sulphur, and then a match, after being ignited, held thereon.

In 1883 my father bought another colony of bees which must have been either mismated Italians or Carniolans. About one-third showed yellow bands like 3-banded Italians, and the rest were leather colored. They were very gentle, quick breeders, fast honey-gatherers, and excessive swarmers. They were also quick in building combs, and they capped their honey snow-white, even when that honey was of a dark color. The year after they appeared nearly all became brown or leather-colored bees. They are far superior to the blacks described, but they are sometimes called "black" bees. This, I suppose, explains the secret. The black bee, which is sometimes so highly praised, is not at all the genuine "little black bee" of Germany, but a strain of bees resembling the black bees somewhat in outward appearance.

Bro. Alphonse Veith.

St. Meinrad, Ind.

"The Practical Bee-Guide"

Six years ago the first edition of the Irish Bee-Guide was published. A second edition has now appeared, and the title has been changed to "The Practical Bee-Guide." Certainly the character of the work warrants the change of name. It has something more than 230 pages, measuring 7x4¾ inches each, written by Rev. J. G. Digges, M. A., the genial editor of that sprightly monthly, the Irish Bee Journal. The style is clear, and of such character as to make the book pleasant reading, in spite of the fact that it is so compactly written that it would be hard to get more facts into the same number of pages.

We can order it for you, bound in art linen, for $1.10; or with a year's subscription to the American Bee Journal —both for $1.90.

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The Chicago-Northwestern Convention

The 31st annual meeting of the Chicago-Northwestern Bee-Keepers' Association was held here in Chicago Nov. 30 and Dec. 1, as announced. There were about 75 bee-keepers present, which resulted in one of the best meetings ever held by bee-keepers in this city. There was scarcely a dull minute from the beginning to the end. Among those present were such excellent convention goers and speakers as Dr. C. C. Miller, M. M. Baldridge, J. L. Anderson, Franklin Wilcox, Jacob Huffman, C. A. Hatch, Wm. M. Whitney, Miss Mathilde Candler, Mrs. R. B. Holbrook, etc. The program consisted mainly of question-box, but there were several interesting papers by E. B. Tyrrell, of Michigan; A. Coppin, of Illinois; C. A. Hatch, Jacob Huffman, and Miss Candler, of Wisconsin. So far as we know, this is the only convention in which the question-box is practically the whole program; and from what all the members say, it is perhaps one of the most interesting meetings of bee-keepers held in this country.

The officers elected for 1911 are as follows: President, George W. York, of Chicago; vice-president, Chas. G. Macklin, of Morrison; secretary-treasurer, Louis C. Dadant, of Hamilton. Maurice G. Dadant, a brother of Louis C., served as secretary of the meeting, as the latter could not be present.

A full shorthand report of the proceedings was taken, and it will be published in connection with the Illinois State convention report early in the new year. This volume of reports will be bound in cloth, and contain possibly 150 to 200 pages.

The dues of the Chicago-Northwestern were raised from $1.00 a year to $1.50, which amount will pay the dues in the three associations—Chicago-Northwestern, Illinois State, and also the National. It is hoped that just as many bee-keepers as possible within the territory of the Chicago-Northwestern Association will send their dues of $1.50 to Mr. Dadant, so that they may receive a copy of the valuable report of the Chicago-Northwestern convention. When one can become a member of three such organizations as mentioned above, for only $1.50, it would seem that the applications should be very numerous.

◆

How About Your Advertising?

Have you anything to sell? Any bees, honey, hives, or anything else that you think the readers of the American Bee Journal might want to buy? If so, why not offer it through our advertising columns? See rates in the first column of the second page of every number of the Bee Journal. We try to keep our columns clean and free from any dishonest advertising.

◆

Pearce Method of Bee-Keeping

This is an illustrated pamphlet 6x8½ inches, just issued (July, 1910), "which fully explains the plan of keeping bees successfully in upper rooms, house attics or lofts, whereby any one either in city or country is enabled with only a small expenditure of labor to get a good supply of honey without coming in contact with the bees, and without having the bees swarm out and leave, or being troubled from stings as you work on one side of the wall and the bees on the other. This method also tells the commercial bee-keeper how he can divide his bees when he wishes to, instead of waiting and watching for them to swarm. It can all be done on the same day, or days if more than one apiary, as the time required for this operation is merely nominal, no swarms issue and go away. These methods are fully explained in this book, and how to care for the bees on the Pearce plan."

We mail this pamphlet for 50 cents, or club it with the American Bee Journal one year—both for $1.35. Send all orders to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

◆

The National Election

Just in time to crowd it in, we have received the result of the November election of the National Bee-Keepers' Association, which is as follows, the 4 officers receiving the highest number of votes being elected for 1911, and the 3 directors with highest number of votes also being elected, to serve 3 years:

FOR PRESIDENT.	
George W. York	895
M. V. Facey	176
Scattering	10
FOR VICE-PRESIDENT.	
W. D. Wright	610
Thomas Chantry	437
Scattering	16
FOR SECRETARY.	
E. B. Tyrrell	538
Louis H. Scholl	375
B. N. Gates	156
Scattering	6
FOR GENERAL MANAGER.	
N. E. France	1081
Scattering	2
FOR THREE DIRECTORS.	
Jas. A. Stone	697
O. L. Hershiser	610
H. A. Surface	537
R. A. Holekamp	519
Frank Wilcox	421
W. P. Southworth	350
Scattering	27

◆

New Jersey Bee-Keepers' Convention

The regular annual meeting of the New Jersey Bee-Keepers' Association will be held in the State House, Trenton, N. J., Wednesday, Dec. 28, 1910. The program is not complete yet, but an interesting one is being prepared. A copy will be mailed to all members, and to any one who will write for it. All bee-keepers in the State and adjoining territory are invited.

A good attendance is desired. Make special effort to come. A new Foul Brood Bill will be presented to the Legislature again this winter, with bright prospects of its being passed, and signed by the Governor. The proposed Bill will be read at this meeting and discussed.

Bring samples of 1910 honey and beeswax, or anything new in the way of bee-fixtures, for exhibition.

ALBERT G. HANN, *Sec.*

Pittstown, N. J.

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A glimpse of the three great laying houses, with 4500 pullets always at work.

READER, if you want to know how two city people, in poor health and without experience, have in a few years built up an egg-business that clears over $12,000 a year, subscribe **now** for **FARM JOURNAL,** and get with it the

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which tells all the secrets of their success, and describes the methods by which they obtained a profit of **$6.41 a year per hen.** (*See offer below.*)

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The publishers of the **Farm Journal** saw the immense value of a book that should describe the proved and tested methods of the Cornings. So, after careful investigation, they decided to publish the **Corning Egg-Book,** and offer it to all who subscribe for the **Farm Journal** on the offer below, to make the paper better known to all people, in city or country, who are interested in *growing things*.

The FARM JOURNAL is made for every one who raises or wants to raise poultry, eggs, fruit, vegetables, milk, butter, honey, etc., as well as grain and cattle. It has the LARGEST CIRCULATION OF ANY FARM PAPER IN THE WORLD—over 750,000. It has departments devoted to housekeeping, dressmaking, recipes, and bright, fresh reading for boys and girls. It is brief, condensed and PRACTICAL. No long-winded essays. "Cream, not skim-milk," is its motto. It is now running a series called "Back to the Soil," true stories of city people who have changed to country life, intensely interesting. It never prints a medical or trashy advertisement, and its columns are an absolutely reliable guide in buying. Most of its subscribers pay FIVE TO TEN YEARS AHEAD. It is a special favorite with women. Every one who has a garden, yard, flower-bed, or even a kitchen, ought to have this bright, cheery, useful home paper. Those who merely exist in cities ought by all means to get it, for it brings a whiff of outdoor life into their homes, and may help them to escape to the country and really LIVE.

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American Bee Journal

Wants, Exchanges, Etc.

[Advertisements in this department will be inserted at 15 cents per line, with no discounts of any kind Notices here cannot be less than two lines. If wanted in this department, you must say so when ordering.]

FOR SALE—160-lb, honey-kegs at 50c each f. o.b. factory. N. L. Stevens, Moravia, N. Y.

ITALIAN Untested Queens, 75 cents; Tested, $1.25. Breeders, $5.00 each. E. M. Collyer,
8A12t 75 Broadway, Ossining, N. Y.

WANTED.—Good salesmen to sell honey in city. The Snyder Bee & Honey Co.,
10Atf Kingston, N. Y.

FOR SALE—Duston White Wyandottes, $2; 15 eggs, $1; $5 per 100.
11A1y Elmer Gimlin, Taylorville, Ill.

FOR SALE — Quantity 10-frame hives and fixtures. Edwin Ewell,
704 Elm Street, Waseca, Minn.

WANTED—One 12-in. Gem Planer; 1 Dovetailing Machine. T. L. McMurray,
11Atf Ravenswood, W. Va.

WANTED—Early orders for the Old Reliable Bingham Bee-Smokers. Address,
12Atf T. F. Bingham, Alma, Mich.

WANTED—1000 dead queens, and 1000 dead drones. Am. Apiculture & Farming Co.,
12A3 2023 Emerson Ave., St. Louis, Mo.

WANTED—A few more 4 and 5 year old Queens; also bees—delivered in Chicago.
C. O. Smith, 5533 Cornell Ave., Chicago, Ill.

Large-boned laying strain of Barred Rocks, Choice cockerels $1.50; Trios, $5.00 while they last. Mrs. W. L. Bennett, Crooksville, Ohio.

WANTED—To buy apiary or small truck & fruit farm close to good town—southern Illinois preferred. E. E. Williams, Olathe, Col.

FOR SALE—Golden Queens that produce 50 to 100 percent 5-banded bees. Untested, $1; Tested $1.50; Select Tes, $2; Breeders, $5 to $10
8A12t J. B. Brockwell, Bradley's Store, Va.

WANTED—Some one who wants a good location for bees, to take up a homestead or Government land. I know a few nice vacant pieces. Address, Jas. M. Level, 8Atf
Yacolt, Clark Co., Wash.

BACK VOLUMES OF AM. BEE JOURNAL.—We have some on hand, and would be glad to correspond with any one who may desire to complete a full set. It may be we can help do it. Address, American Bee Journal,
146 W. Superior St., Chicago, Ill.

FOR SALE.—Country home, 12 acres, one mile from city, on pike and telephone line; ideal location for poultry and fruit; buildings for 350 hens; bearing fruit. Famous white-clover section; splendid local market; convenient home and water supply.
Allen H. Whisner,
Martinsburg, Berkeley Co., W. Va.

FOR SALE—175 Colonies of Bees, good alfalfa and sweet clover range; 3 apiaries; complete modern outfit for both comb and extracted honey production. No bee-diseases. No honey crop failure so far. Good home market, excellent mild climate. Price right. If interested, write at once.
12A2t C. Wiersteiner,
Roswell, Colorado Springs, Colo.
REF. — Colo. Honey Producers' Association.

FOR SALE—Small tracts of lands in bearing apples; choice apiary sites; 200 colonies of leather Italian Bees; no disease; 8-fr. hives. Will sell fixtures. Honey surplus for 1910, about 100 lbs. per colony; nectar drawn from thousands of acres alfalfa and fruit-bloom. "Come to the 'Great Pecos Valley,' the land of 'sunshine' and 'irrigation.'" Mild winters; dry, invigorating air, cures asthma; arrests tubercular troubles. For particulars, address— Henry C. Barron, 11A
Hagerman, N. Mex. (owner; no commissions

Honey to Sell or Wanted

WANTED—White clover, basswood and amber extracted honey. Give prices and description. P. B. Ramer, Harmony, Minn.

FOR SALE—Well-ripened clover-basswood honey in new 60-lb. cans, at 9 cents a pound.
Homestead Farm.
11A2t C. J. Baldridge, Kendaia, N. Y.

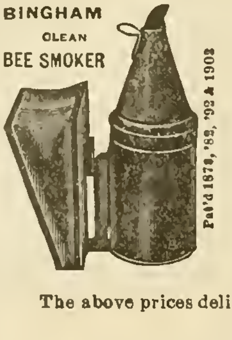
WANTED — Choice extracted white and amber honey in barrels or cans. Send sample, and price delivered f. o. b. Preston.
11Atf M. V. Facey, Preston, Minn.

FROM THE BEE-YARDS OF HENRY STEWART the thickest, finest-flavored white clover honey I ever produced. Put up and nicely labeled in
2-lb. tin friction-top can, 36 in case, $8.60.
5-lb. tin friction-top pails, 12 in case, $6.75.
10-lb. tin friction-top pails, 6 in case, $6.50
1 protected tin can, 60 lbs., $6.00.
The 2-lb. cans contain as much honey as 2½ of the average sections, and is a good retailer. Also 10,000 lbs. of Clover and Heartsease blend a very fine honey at a less price. Satisfaction guaranteed. Sample free.
10Atf Henry Stewart, Prophetstown, Ill.

"The Amateur Bee-Keeper"

This is a booklet of 86 pages, written by Mr. J. W. Rouse, of Missouri. It is mainly for beginners—amateur bee-keepers—as its name indicates. It is a valuable little work, revised this year, and contains the methods of a practical, up-to-date bee-keeper of many years' experience. It is fully illustrated. Price, postpaid, 25 cents; or with the American Bee Journal one year—both for $1.10. Send all orders to the office of the American Bee Journal, 146 West Superior St., Chicago, Ill.

HAND-MADE SMOKERS



Extracts from Catalogs—1907:

Chas. Dadant & Son, Hamilton, Ill.—This is the Smoker we recommend above all others.

G. B. Lewis Co., Watertown, Wis.—We have sold these Smokers for a good many years and never received a single complaint.

A. I. Root Co., Medina, Ohio.—The cone fits inside of the cup so that the liquid creosote runs down inside of the smoker.

All Bingham Smokers are stamped on the tin, "Patented 1878, 1892, and 1903," and have all the new improvements.

Smoke Engine—largest smoker made	$1.50	4	inch stove
Doctor—cheapest made to use	1.10	3½	"
Conqueror—right for most apiaries	1.00	3	"
Large—lasts longer than any other	.90	2½	"
Little Wonder—as its name implies	.65	2	"

The above prices deliver Smoker at your post-office free. We send circular if requested.

Original Bingham & Hetherington Uncapping-Knife.

T. F. BINGHAM, Alma, Mich.

Patented, May 20, 1879. **BEST ON EARTH.**

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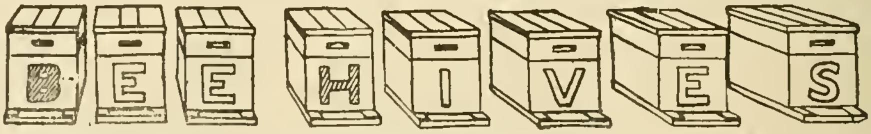

Are our **Specialty.** We furnish such extensive bee-keepers as E. D. Townsend and others. Consider getting your bees into **Protection Hives** this Fall. Give us list of Goods wanted.

A. G. WOODMAN CO., Grand Rapids, Mich.

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Langstroth on the Honey-Bee

Revised by Dadant. Latest Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. Bound in substantial cloth, and has nearly 600 pages. Revised by that large, practical bee-keeper, so well known to all beedom—Mr. C. P. Dadant. Each topic is clearly and thoroughly explained, so that by following the instructions of this book one can not fail to be wonderfully helped on the way to success with bees.

We mail the book for $1.20, or club it with the American Bee Journal for one year—both for $2.00. This is indeed a splendid chance to get a grand bee-book for a very little money.

GEORGE W. YORK & CO.
146 W. Superior St. - CHICAGO, ILL.

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Dr. F. L. Peiro, 72 E. Madison St., Chicago, Ill., will be glad to furnish advice free to readers of the American Bee Journal along the line of obscure surgical and medical aid. Any of our readers, who wish to consult a doctor who understands his business, will find it to their interest to write or see Dr. Peiro. The Editor of the American Journal has known him intimately as a neighbor, and also through personal treatment, for almost 20 years. He will "treat" you right, if you give him the opportunity.

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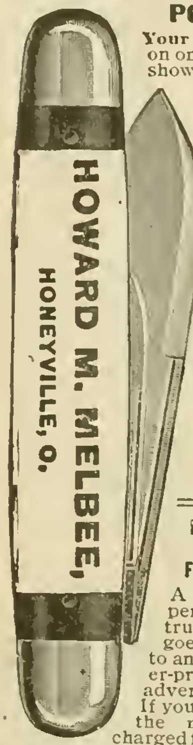
Sample copies free, to help you interest your friends and get subscriptions. If you will send us names of your neighbors or friends we will mail them sample copies free. After they have received their copies, with a little talk you can get some to subscribe and so either get your own subscription free or receive some of the useful premiums below. They're worth getting. **We give you a year's subscription free for sending us 3 new subscriptions at $1.00 each.**

BEE-KEEPERS' NOVELTY POCKET-KNIFE



Your name and address put on one side of the handle as shown in cut, and on the other side pictures of a queen-bee, a worker, and a drone. The handle is celluloid and transparent, through which is seen your name. If you lose this knife it can be returned to you, or serves to identify you if you happen to be injured fatally, or are unconscious. Cut is exact size. Be sure to write exact name and address. Knife delivered in two weeks. Price of knife alone, postpaid, $1. With year's subscription, $1.90. **Free** for 3 new $1 subscriptions.

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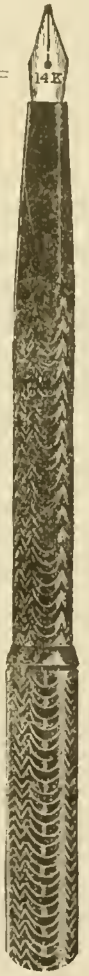
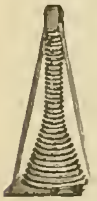


A really good pen. As far as true usefulness goes it is equal to any of the higher-priced, much-advertised pens. If you pay more it's the **name** you're charged for. The Gold Nib is guaranteed 14 Karat gold, Iridium pointed. The holder is hard-rubber, handsomely finished. The cover fits snugly and can't slip off because it slightly wedges over the barrel at either end. This pen is non-leakable. It is very easily cleaned, the pen-point and feeder being quickly removed. The simple feeder gives a uniform supply of ink to the pen-point without dropping, blotting or spotting. Every bee-keeper ought to carry one in his vest-pocket. Comes in box with directions and filler. Each pen guaranteed. Here shown ⅔ actual size.

Price alone, postpaid, $1.00. With a year's subscription, $1.70. **Given free** for 3 new subscriptions at $1.00 each.

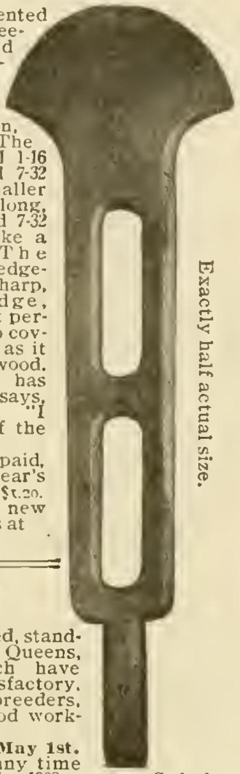
QUEEN-CLIPPING DEVICE



The Monette Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. 4½ inches high. It is used by many bee-keepers. Full printed directions sent with each one.

Price alone, postpaid, 25 cents. With a year's subscription. $1.10. **Given free** for 2 new subscriptions at $1.00 each.

IDEAL HIVE-TOOL



Exactly half actual size.

A special tool invented by a Minnesota bee-keeper, adapted for prying up supers and for general work around the apairy. Made of malleable iron, 8½ inches long. The middle part is 1 1-16 inches wide and 7-32 thick. The smaller end is 1 7-8 inches long, 1-2 inch wide, and 7-32 thick, ending like a screw-driver. The larger end is wedge-shaped having a sharp, semi-circular edge, making it almost perfect for prying up covers, supers, etc., as it does not mar the wood. Dr. Miller, who has used it since 1903 says, January 7, 1907: "I think as much of the tool as ever."

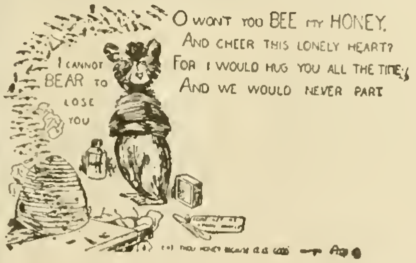
Price alone, postpaid, 40cents. With a year's subscription, $1.20. **Given free** for 2 new subscriptions at $1.00 each.

PREMIUM QUEENS

These are untested, standard-bred, Italian Queens, reports of which have been highly satisfactory. They are active breeders, and produce good workers.

Sent only after May 1st. Orders booked any time for 1908 queens. Safe delivery guaranteed. Price, **90** cents each, 6 for $4.50. or 12 for $8.50. One queen with a year's subscription, $1.60. **Free** for 2 new $1 subscriptions.

HUMOROUS BEE POST-CARDS


O WONT YOU BEE MY HONEY.
AND CHEER THIS LONELY HEART?
FOR I WOULD HUG YOU ALL THE TIME;
AND WE WOULD NEVER PART
I CANNOT BEAR TO LOSE YOU

A "Teddy Bear" on good terms with everybody including the bees swarming out of the old-fashioned "skep." Size 3¼ x 5¼, printed in four colors. Blank space 1¼ x 3 inches is for writing. Prices—3, postpaid, 10 cents; 10 for 25 cents. Ten with a year's subscription, $1.10. 6 **given free** for one $1.00 subscription.

BOOKS FOR BEE-KEEPERS

Forty Years Among the Bees, by Dr. C. C. Miller.—334 pages, bound in handsome cloth, with gold letters and design, illustrated with 112 beautiful half-tone pictures, taken by Dr. Miller. It is a good, live story of successful bee-keeping by one of the masters, and shows just how Dr. Miller works with bees. Price alone, $1.00. With a year's subscription, $1.75. GIVEN FREE for 3 new subscriptions at $1.00 each.

Advanced Bee-Culture, by W. Z. Hutchinson.—The author is a practical and helpful writer. 330 pages; bound in cloth, beautifully illustrated. Price alone. $1.20. With a year's subscription, $1.90. GIVEN FREE for 3 new subscriptions at $1.00 each.

A B C & X Y Z of Bee Culture, by A. I. & E. R. Root.—Over 500 pages, describing everything pertaining to the care of honey-bees. 400 engravings. Bound in cloth, price alone, $1.50. With a year's subscription, $2.25. GIVEN FREE for 5 new subscriptions at $1.00 each.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—How the very best queens are reared. Bound in cloth and illustrated. Price alone, $1.00. With a year's subscription, $1.50. GIVEN FREE for 2 new subscriptions at $1.00 each. In leatherette binding, price alone, 75 cents. With a year's subscription, $1.25. GIVEN FREE for 2 new subscriptions, $1.00 each.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook.—This book is instructive, helpful, interesting, thoroughly practical and scientific. It also contains anatomy and physiology of bees. 544 pages, 295 illustrations. Bound in cloth. Price alone. $1.20. With a year's subscription, $1.90. GIVEN FREE for 4 new subscriptions at $1.00 each.

Langstroth on the Honey-Bee, revised by Dadant.—This classic has been entirely rewritten. Fully illustrated. No apiarian library is complete without this standard work by "The Father of American Bee-Culture." 520 pages, bound in cloth. Price alone, $1.20. With a year's subscription, $2.00. GIVEN FREE for 4 new subscriptions at $1.00 each.

The Honey-Money Stories.—64-page booklet of short, bright items about honey. Has 33 fine illustrations, and 3 bee-songs. Its main object is to interest people in honey as a daily table article. Price 25 cents. With a year's subscription, $1.10. GIVEN FREE for one new subscription at $1.00. Three copies for 50 cents; or the 3 with a year's subscription, $1.30; or the 3 copies GIVEN FREE for 2 new subscriptions at $1.00 each.

Amerikanische Bienenzucht, by Hans Buschbauer, is a bee-keepers' handbook of 138 pages, which is just what our German friends will want. It is fully illustrated and neatly bound in cloth. Price alone, $1.00. With a year's subscription, $1.70. GIVEN FREE for 3 new subscriptions at $1.00 each.

THE EMERSON BINDER

A stiff board outside like a book-cover with cloth back. Will hold easily 3 volumes (36 numbers) of the American Bee Journal. Makes reference easy, preserves copies from loss, dust and mutilation. Price, postpaid, 75 cents. With a year's subscription. 1.50. GIVEN FREE for 2 new subscriptions at $1.00 each.

WOOD BINDER

Holds 3 volumes. Has wood back but no covers. Price, postpaid, 20 cents. With a year's subscription $1.10. GIVEN FREE for one new subscription at $1.00.

BEE-HIVE CLOCK

A few of these handsome "bronze-metal" clocks left. Base 10 1-2 inches wide by 9 3-4 inches high. Design is a straw skep with clock face in middle. Keeps excellent time, durable and reliable. Weight, boxed, 4 pounds. You pay express charges. Price, $1 50. With a year's subscription, $2.25. GIVEN FREE for 5 new subscriptions at $1.00 each.

George W. York & Co., 146 W. Superior St., Chicago, Ill.

Gleanings in Bee-Culture for 1910--11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees, to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee Men at Work.

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How these Moving Pictures were Obtained.

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee-keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees,** and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb-honey production, **Mr. S. D. House, among his bees.** While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's neighbors, will also show a scheme for screening a honey-house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and Mr. O. B. Metcalf, of Mesilla Park, N. M., will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee-matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements.

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet-clover seed, *Melilotus indica*, postpaid. Do not forget that in order to get this seed **free you must send $1.00 before your subscription expires.**

To encourage old subscribers to secure new ones, we will send a one-pound package postpaid, of this yellow-sweet-clover seed to every one who will send us $1.00 for a new subscriber.

Yellow Sweet Clover—Melilotus Indica. What is It?

This, we believe, is a very remarkable honey-plant. We have been fortunate, we believe, in securing all the seed obtainable in the United States, and **we now have on hand something like a carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover *Melilotus alba*, except that the plants do not grow quite so tall, and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season, and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis*, and much earlier than** the ordinary white sweet clover. It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa **or anything else.**

Do Not Delay Ordering.

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio.

BETTER FRUIT

The best fruit growers' illustrated monthly published in the world. Devoted exclusively to modern and progressive fruit growing and marketing. Northwestern methods get fancy prices, and growers net $200 to $1000 per acre. One Dollar per year. Sample copies free.

Better Fruit Publishing Co. **HOOD RIVER, OREGON.**

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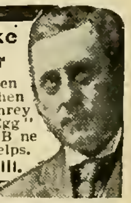
I Will Tell You How to Make Your Hens Lay All Winter

Get into the 150 to 250 eggs a year a hen class. Make your hens winter layers when prices are high. You can do it the Humphrey Way. Send for book, "The Golden Egg" and Egg-making facts on the Humphrey Bone Cutter and other Humphrey Poultry Helps.

HUMPHREY, Amber St. Factory, Joliet, Ill.



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FENCE ***Strongest Made***

Made of **High Carbon Double Strength** Coiled Wire. **Heavily Galvanized** to prevent rust. Have **no agents.** Sell at **factory prices on 30 days' free trial.** We pay **all freight.** 37 heights of farm and poultry fence. **Catalog Free.**

COILED SPRING FENCE CO.
Box **89** **Winchester, Indiana.**

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LEWIS BEEWARE -- Shipped Promptly

SEND FOR CATALOG

Early-Order Discounts: —Sept. to Oct. 15th, 5%; Oct. 15th to Dec. 1st, 4%; Dec. 1st to Jan. 15, 3%; Jan. 15th to March 1st, 2%; March 1st to April 1st, 1%.

Applies to all except Honey-Packages.

Extracted Honey for Sale,
and Wanted

Beeswax Wanted.
28c Cash—30c Trade,

ARND HONEY & BEE-SUPPLY CO. **NOT INC.**

(Successors to the York Honey & Bee-Supply Co.) **H. M. ARND, Proprietor.**

148 West Superior St., CHICAGO, ILL.

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Engravings for Sale.

We are accumulating quite a large stock of bee-yard engravings and other pictures used from time to time in the American Bee Journal. No doubt many of them could be used by bee-keepers in their local newspapers, on their letterheads, on souvenir cards, or in other profitable or interesting ways. If we can sell them it will help us to pay for others that we are constantly having made and using in these columns.

We do not have a catalog or printed list of the engravings, but if you will let us know just which you want we will be pleased to quote you a very low price, postpaid. Just look through the copies of the Bee Journal and make your selection. Then write to us.

GEORGE W. YORK & CO.

146 West Superior Street, - CHICAGO, ILL.

Please mention Am. Bee Journal when writing.

Two years for $1.00

As a rule, persons subscribing for the Review after the beginning of the year ask for the back numbers so that they may have a complete volume, and extra copies are always printed to supply this demand. That no one may be disappointed, more copies are printed than probably will be needed. At present I have nearly 200 complete sets for 1910, and rather than have them cumber my shelves, and gather dust year after year, I prefer to have them out doing good; hence as long as the supply holds out, I will send a complete set to each one who sends me a $1.00 for the Review for 1911.

Back numbers of the Review are different from those of newspapers and some journals. The information that they contain is just as valuable now as when first published. It is impossible on this page to give much description, but I will mention some of the articles that appear in the Review for 1910. They are as follows:

Disposing of the Honey Crop to Best Advantage

A special feature of the Review for 1910, is a series of articles from leading bee-keepers on the subject. Some of them have added nearly one-half to their income by improving their methods of marketing.

Making 100 Percent Increase, Yet Getting a Full Crop of Comb Honey

This would not seem possible, and yet Mr. Leonard S. Griggs, of Flint, Mich., has a plan that he calls "double-shook-swarming," whereby he really accomplishes this feat, and describes it in an article for 1910.

Freeing Extracting Supers of Bees Without Bee-Escapes or Removing Combs

It has been considered well-nigh impossible to remove combs for extracting when robbers are troublesome, without using bee-escapes, yet three veterans, E. D. Townsend, F. B. Cavanagh, and R. F. Holtermann, all describe in the Review a system of management whereby this can be accomplished in a practical manner.

A New System of Extracting

Mr. E. D. Townsend, of Michigan, has evolved a new system of extracting honey. It is radically different, and away ahead of what has been done in the past. In the first place, the combs are freed from the bees without removing them from the hives, yet without the use of bee-escapes. The honey is freed from pieces of wax, or any foreign substance, without the use of cloth strainers, and every *last drop* of honey in the cappings is saved. This system is illustrated and described in the Review for 1910.

Rendering Old Combs into Wax, With Great Ease, Speed and Perfection

Mr. W. J. Manley, of Sandusky, Mich., has perfected a method of wax making that deserves the above title. The Roots say that it stands at the head of wax-rendering methods. The characteristic features of the plan are that of pressing only a small amount of material at one time, doing it very thoroughly, yet with such a system that one batch can follow another in rapid succession; pressing the slumgum under water that is boiling hot releasing and re-applying the pressure *a la* Hershiser; getting the wax up on top of the water, away from the slumgum and the burlap packing; then pouring the wax and hot water off into a cooling tank, and last, but not least, drawing off the hot water from under the wax, in the cooling tank, and using the hot water over again for melting the next batch, thus saving the heating of another boiler of water. I visited Mr. Manley, saw the work performed, made photographs of the implements (all home-made), and described them and the process in the Review.

New York's Comb Honey Prize Winner Writes for the Review

Mr. S. D. House, of New York, has a system of comb-honey production which enables him to produce honey whereby he has been able, for 14 years in succession, to secure the 1st premium at the York State Fair; and such is the demand for it that he can virtually set his own price upon it. In regard to the quantity produced, per colony, here is a pointer; A neighboring bee-keeper told me that he had heard so much about the big crops produced by Mr. House, that for two or three years he had been going up there in June to see the honey on the hives, and it would surprise one to see the amount of honey in the supers before other bees had even made a start in the sections. Mr. House describes and illustrates his system in a series of articles in the Review for 1910.

Producing a Crop of Comb Honey With Only Four Visits During the Harvest—No Swarming

Mrs. S. Wilbur Frey, of Sand Lake, Mich., has, for 16 years, managed from two to four apiaries, producing from $500 to $1000 worth of comb honey yearly (in the last three years she has cleared $1000 yearly), and what is of much importance, she has practically solved the swarming problem — no watching for swarms is necessary. She does most of the work herself, with the aid of a helper, when necessary to do the heavy lifting. She has developed a system of management which enables her to manage an apiary with only four visits during the working season. In a long article in the Review for 1910, she describes her methods.

Wonderful Results from Care in Breeding

The one apicultural field left nearly untrodden is that of improvement in stock. None holds out greater rewards for the efforts put forth. This is proven by the wonderful yields secured by the few enterprising men who have ventured into this fertile realm. For instance, when attending conventions and visiting bee-keepers last winter in New York, I repeatedly heard of the wonderful strain of Italians and the bountiful yields secured by Geo. B. Howe, of Black River, N. Y. I corresponded with Mr. Howe, and learned that, for 14 years, he had been working in the direction of improving his stock; and that, of late, it is not unusual for him to secure 200 pounds of comb honey per colony. For three years he has offered, and would gladly pay, $100 for a queen whose bees would prove superior to his present stock. Mr. Howe was induced to tell, in the Review, the story of his success. How he secured the best stock to begin with; how the work of weeding out and selection was performed; his methods of breeding—in short, he gives the information that will enable any other enterprising bee-keeper to go and do likewise—to easily add thousands of pounds yearly to his surplus. Mr. Howe tells exactly what steps he would take if his present stock were all swept away, and he was compelled to start all over again anew.

Send me $1.00 and I will send you the back numbers, place your name on the subscription list, and continue to send you the Review to the end of 1911.

W. Z. Hutchinson, Flint, Mich.

CAPON TOOLS

CAPONS bring the largest profits —100 per cent more than other poultry. Caponizing is easy and soon learned. Progressive poultrymen use

PILLING CAPONIZING SETS

Postpaid $2.50 per set with free instructions. The convenient, durable, ready-for-use kind. Best material. We also make *Poultry Marker 25c. Gape Worm Extractor 25c French Killing Knife 50c. Capon Book Free.*

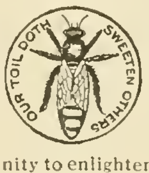
G. P. Pilling & Son Co., Philadelphia, Pa.

Please mention Am. Bee Journal when writing.

Celluloid Queen-Buttons

These are very pretty things for bee-keepers or honey-sellers to wear on their coat-lapels. They often serve to introduce the subject of honey, which might frequently lead to a sale.

NOTE. — One bee-keeper writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of these buttons], as it will cause people to ask questions about the busy bee, and many a conversation thus started wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."


OUR TOIL DOTH SWEETEN OTHERS

The picture shown above is a reproduction of a motto queen-button that we offer to bee-keepers. It has a pin on the under-side to fasten it.

PRICES—by mail—1 for 6 cts.; 2 for 10 cts.; or 6 for 25 cts. Address,

GEORGE W. YORK & CO.
146 West Superior Street, - CHICAGO, ILL.

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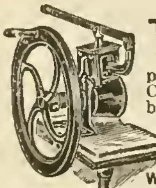

This Bone Cutter produces filled egg baskets. Cuts fast and easy. Green bone, scraps from table, vegetables, scrap cake. Always ready for use.
Send for catalog.
WILSON BROS., Box 814 EASTON, PA.

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READY IN JANUARY!

My new enlarged Catalog describing the
Best and Cheapest Bee-Supplies.

Also of Fancy Breeds of **CHICKENS,** which will interest you. Send for it. FOR SALE—Barred & White Plymouth Rock, and White Wyandotte Cockerels at $1.00 each.

H. S. DUBY, St. Anne, Ill.

For Sale Best of **Roofing** at Lowest Price.
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"Scientific Queen-Rearing"

No other book compares with this one written by Mr. G. M. Doolittle. He is an expert in the business. It tells just how the very best queens can be reared. Bound in cloth. By mail, $1.00; or with the American Bee Journal, one year—both for $1.60. In leatherette binding, 75 cents, postpaid; or with the American Bee Journal one year—both for $1.25. Send to the American Bee Journal, 146 W. Superior St., Chicago, Ill.

We will pay 30 cents a pound for Choice Quality Pure

BEESWAX

delivered New York, until further notice.

We are in the market for

HONEY

Both COMB and EXTRACTED. State quantity you have to offer, with all particulars.

HILDRETH & SEGELKEN,
265-267 Greenwich St.,
NEW YORK, N. Y.

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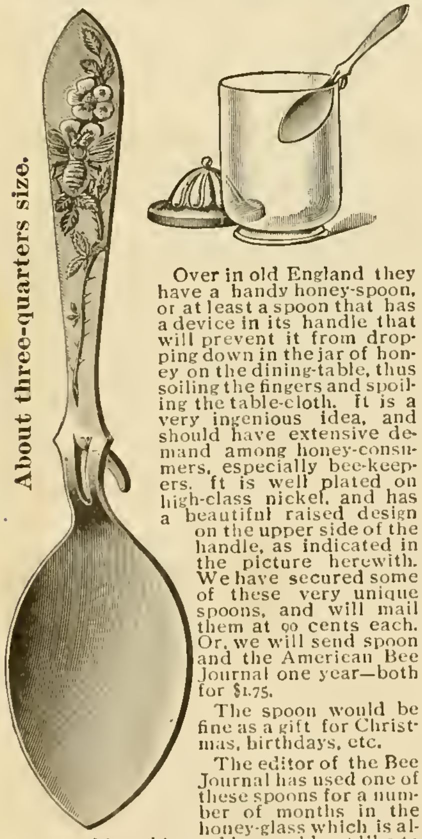
An English Honey-Spoon



About three-quarters size.

Over in old England they have a handy honey-spoon, or at least a spoon that has a device in its handle that will prevent it from dropping down in the jar of honey on the dining-table, thus soiling the fingers and spoiling the table-cloth. It is a very ingenious idea, and should have extensive demand among honey-consumers, especially bee-keepers. It is well plated on high-class nickel, and has a beautiful raised design on the upper side of the handle, as indicated in the picture herewith. We have secured some of these very unique spoons, and will mail them at 90 cents each. Or, we will send spoon and the American Bee Journal one year—both for $1.75.

The spoon would be fine as a gift for Christmas, birthdays, etc.

The editor of the Bee Journal has used one of these spoons for a number of months in the honey-glass which is always on his table, and he would not like to be without this spoon again, as it is so convenient, and also unusual in this country. We can fill orders promptly now. You certainly would be pleased with this honey-spoon, and so would any one to whom you might present it. Send all orders to,

GEORGE W. YORK & CO.,
146 W. Superior St., - CHICAGO, ILL.

Mr. Bee-Man

We carry in stock the well-known

Lewis Beeware, Bingham Smokers, Dadant's Foundation, or Anything the Bee-Keeper may need. **Catalog Free.**

Beeswax Wanted.

The C. M. Scott Co., 1004 E. Wash. St. Indianapolis, Ind.

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for a Poultry Magazine when you can get

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FOR EVEN LESS

If you take advantage of this liberal offer. The NATIONAL is an up-to-date poultry paper, published monthly in honor of Her Majesty, the American Hen. Devoted to practical poultry keeping in all its branches, it will help you make more money out of your poultry. Try it a year at our expense, by cutting out this ad., write your name and address plainly on the two dotted lines below, enclosing only fifteen (15) cents to help pay postage, and we will send you the NATIONAL for one full year. Address,

The National Poultry Journal, Business Offce, Elkton, W. Va.

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COMB FOUNDATION

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WORKING Your WAX for You.

☞ Write us for **Estimate** on full **Line of Supplies.** It will pay you, and costs nothing.

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Gus Dittmer Company, - Augusta, Wisconsin.

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Cook's Honey-Jar.

With patent AIR-TIGHT SANITARY STOPPER is the Best and Cheapest Honey-Jar made. Sold only by

J. H. M. Cook, 70 Cortlandt St., N. Y. City.

Send 10 cents (half postage) for sample Jar, and catalog of WELL-BRED BEES, QUEENS, HIVES, etc.

☞ The oldest Bee-Supply Store in the East. 2Atf

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Honey and Beeswax

Chicago, Nov. 26.—During the past month the comb honey trade has been unusually active, receipts selling soon after arrival and at firm prices. The fancy lots have been bringing 17@18c, with the lower grades from 1@2c less, and selling slowly, which is also true of the amber grades. Extracted has met with an equally good demand, at from 8@9c for the white, and 7@8c for the amber. An excellent demand continues for beeswax at 30@32c per pound, according to color and cleanliness. R. A. Burnett & Co.

Cincinnati, Nov. 26.—The market on comb honey is rather quiet, and same is selling at $3.75 per case for No. 1 white. Amber extracted in barrels is selling at 7c; in cans, 7½@8c. White extracted honey in 60-lb. cans, 9@10c. California light amber, 8½c. Beeswax is in fair demand at $32 per 100 lbs. These are our selling prices, not what we are paying. C. H. W. Weber & Co.

Kansas City, Mo., Nov. 26.—Our market is almost bare of extracted honey, and the demand is good; white extracted would sell for 8@8½c, and amber ½c less. The supply of comb is fair, and the demand fair at $3.25 per case for No. 1 white in 24-section cases; No. 2 white at $3.00; No. 1 amber at $3.00; and No. 2 amber $2.75. Beeswax is selling at 25@28c per pound.

C. C. Clemons Produce Co.

New York, Nov. 26.—The demand for comb honey is not quite as brisk as heretofore, which is generally the case at this time of the year. While there is no overstock of fancy and No 1 white, the supply is sufficient to meet all demands, and therefore we expect that prices on these grades will hold firm; namely, 15c per pound for fancy and 14c per pound for No. 1. Off grades of white, mixed and buckwheat are rather neglected, specially the latter two, and we have noticed the decrease in the demand especially for the buckwheat for the past few years. The market is heavily stocked with these grades, and prices will have to be shaded considerably in quantity lots in order to move it. For the present time we can not encourage shipments of mixed or buckwheat honey. Present prices are from 10@11c per pound. The demand is good for nearly all grades of extracted honey at unchanged prices. The supply is sufficient to meet all demands, excepting California white sage. West India extracted is arriving quite freely, principally Porto Rican, and finds ready sale at from 85@90c per gallon for fancy quality. Beeswax quiet at from 29@30c per pound. Hildreth & Segelken.

Boston, Nov. 25.—Fancy and No. 1 white comb honey, 15@16c. Fancy white extracted, 10@11c. Beeswax, 30c. Blake,-Lee Co.

Indianapolis, Nov. 26.—The demand for best grades of white honey is brisk. Jobbers are offering fancy white comb at 18c; No. 1 white at 17c. Finest extracted at 11c, with some slight reductions on quantity lots. It is to be presumed that producers are being paid about 2 cents less, per pound, than above prices. Amber honey is in poor demand here. Producers of beeswax are being paid 28 cents cash, or 30 cents in exchange for merchandise.

Walter S. Pouder.

Zanesville, Ohio, Dec. 1.—Honey is in fair demand. For No. 1 to fancy white comb, producers should receive 15@16c, and for best white extracted 8½@9c, delivered here. Prices in small lots to retail grocers, run 2@3c higher than these figures on comb, and 1@1¼c on extracted. For beeswax, producers are offered 28c cash, 30c in trade. In wholsale quantities beeswax brings 32@35c, according to amount ordered.

Edmund W. Peirce.

Cincinnati, Nov. 21.—While the price on fancy comb honey is very firm, the demand is not as good as it was 60 days ago, owing to the fact that the many bee-keepers bring in their little lots to the country stores which lessens the demand from the jobber. We are selling strictly fancy comb honey in 24-section cases, $4.00 by the single case, and to the jobber at $3.75. Amber and dark comb honey is not wanted in this market at any price. Extracted honey is suffering to some extent in demand, as it always does around the holidays. There is no reason for lowering the prices stated, as it will not hasten the sales, we, therefore, quote amber honey in barrels, according to quantity and quality purchased, from 5½@7¾c; fancy white in 60-lb. cans, from 9@10c. We are paying for choice beeswax from 28@30c per pound delivered here. The Fred W. Muth Co.

Sweet Clover Seed!

Sweet Clover is rapidly becoming one of the most useful things that can be grown on the farm. Its value as a honey-plant is well known to bee-keepers, but its worth as a forage-plant and also as an enricher of the soil are not so widely known. However, Sweet Clover is coming to the front very fast these days. Some years ago it was considered as a weed by those who knew no better. The former attitude of the enlightened farmer today is changing to a great respect for and appreciation of Sweet Clover, both as a food for stock and as a valuable fertilizer for poor and worn out soils.

The seed can be sown any time from now until next April or May. From 18 to 20 pounds per acre of the unhulled seed is about the right quantity to sow.

We can ship promptly at the following prices:

Postpaid, 1 pound for 30 cents, or 2 pounds for 50 cents. By express or freight, f. o. b. Chicago—5 pounds for $1.00; 10 pounds for $1.75; 25 pounds for $4.00; 50 pounds for $7.50; or 100 pounds for $12.00.

If wanted by freight, it will be necessary to add 50 cents more for cartage to the above prices on each order.

If seed is desired of the Yellow Sweet Clover, add 5 cents per pound to the above prices.

Address all orders to,

Arnd Honey & Bee-Supply Co.,
148 W. Superior St., CHICAGO, ILL.

C. H. W. Weber & Co.
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Dealers in Bee-Keepers' Supplies, Comb and Extracted Honey, etc.

Wish All their Patrons

A Merry Christmas
and
A Happy New Year

BEE-KEEPERS OF THE NORTH

BEE-KEEPERS OF THE WEST

BEE-KEEPERS OF THE EAST

Is Your crop of White clover Honey Short? We can furnish you

ALFALFA HONEY

Both White and Water-White. Finest Quality. Prices quoted by return mail, and Shipments made Promptly.

BEESWAX wanted for Cash or in Exchange for Bee-Supplies.

Beeswax Worked for you into **Dadant's Foundation** Best by Test. Let us send you proof.

Early Order Discounts now offered for Cash.

Satisfaction Always Guaranteed.

DADANT & SONS, Hamilton, Illinois.

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Clemons Bee Supply Co.,
Kansas City, Mo.

Our customers and friends in the West will be pleased to learn they can have their orders for **"Falcon" Bee Goods** filled with much saving in freight and time from this great railroad center.

The first car of our goods will reach the **Clemons Bee-Supply Co.** about the middle of December. Send them a list of your 1911 needs, and get goods early from this fresh stock. Have your name put on their list for 1911 Catalog.

W. T. Falconer Manufacturing Co.
Falconer, N. Y.

(Near Jamestown. The same place for nearly forty years, only we get our mail now at the post-office a few doors from the factory.)

Wanted —Old Combs and Slumgum. Will work it for half and pay 30 cents a pound for your share of wax. A. A LYONS,
8A12t Rt. 5, Box 88, Ft. Collins, Colo.

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WANTED.—To complete files of the American Bee Journal, parts of Volumes XXIX to XXXIV, inclusive. Any one having any of these to offer, please write to—
Morley Pettit, Guelph, Ontario, Canada.

We are first hands for choice California-grown
YELLOW BLOSSOM

Melilotus Seed

(Sweet Clover)

For introductory purposes, and that bee-men may test this valuable California product, we offer to deliver at your nearest express office, all charges prepaid by us, one 5-pound package of hulled seed (will sow ⅓ acre) for $1.25; two packages, $2.25; five packages, $5.00.

Samples mailed, and larger quantities quoted.

The seed is from our own harvest, is fully matured, free from noxious weed-seeds, and possesses high germinating qualities.

If you wish other **California Grown Seeds,** write us.

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